

Furniture & cabinetmaking

DESIGN • INSPIRATION • PROJECTS • TECHNIQUES • TESTS • NEWS • EXCELLENCE

Joint success

Daniel Graham uses basic physics to create an impossible joint

Feature

The Arts & Crafts
legacy exhibition

Campaign trail

Build a traditional chest
with a contemporary twist

Tongue & groove shoot-out

Hand vs machine

Virtuoso

Inside the tool chest
of Henry O. Studley

On test

Bad Axe
12in Stiletto
dovetail saw

Show report

WIA 2015

Restoration workshop part 2

Extending the life of a set
of original drawer runners

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Welcome to...

...your past, present and future



PHOTOGRAPH BY DEREK JONES

This month I have mainly been getting to grips with 19th-century joinery in one shape or another. Our main project in this issue is a campaign-style chest – page 27 – destined for an early, if not premature retirement alongside a genuine example. It's a style of furniture that we're all familiar with even if we're not entirely sure where it comes from and when it was made. Roughly speaking, genuine pieces can be found within a 200-year period from the mid-1700s to the roaring 1920s. Admittedly it's more of a barn door than a window. But if you take the concept of portability, robustness and utility you could argue it's still very much alive and available on a high street near you under the guise of camping – festival – equipment.

Something you're less likely to find, though, unless you count the bricks and mortar of course, are good examples of Regency craftsmanship. The window, more of a fanlight by comparison, is a couple

of decades around the early 1800s when the age of exclusively handmade items was entering its twilight years. This is one of the most interesting periods of furniture design to study as many of the fundamental techniques that constitute good cabinetwork had been ironed out. It was the continuation of a period of experimentation and freedom of expression that had been cut short by the French Revolution of 1789. The more affluent European states had all navigated to the farthest reaches of the Earth and their experiences were influencing every aspect of society and culture. My little slice of this comes in the shape of our restoration project – page 51 – as we tackle the badly worn out runners of our rosewood chiffonier. These aren't hard to find if you have a good auction house nearby and for a few quid you have a real slice of history and an insight into the workings of a craftsman schooled in the traditional way. Books, magazines and online tutorials are a good

way to learn but this is the real deal. And talking of which, that legendary poster boy Henry O. Studely – actually it was his toolchest and not him in person – that graces the walls of thousands of workshops, has joined us this month as we have gained permission to run an extract from the latest Lost Art Press book, *Virtuoso* – page 62. These few pages are really just a tease from an outstanding body of work that will make your workshop library complete.

But before this is all misconstrued as just another trip down a very long and winding memory lane pause for a while on our gallery from the 21st Century Furniture Series V exhibition – above and page 22. A finer representation of all things outstanding, past and present, is hard to imagine.

Derek Jones

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Furniture & cabinetmaking

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**Woodworking is an inherently dangerous
pursuit. Readers should not attempt the
procedures described herein without
seeking training and information on the
safe use of tools and machines, and all readers should
observe current safety legislation.**

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Front cover image by Daniel Graham

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www.woodworkersinstitute.com



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Contribute to these pages by telling us about matters of interest to furniture makers. Call Derek Jones on 01273 402 843 or email derekj@thegmcgroup.com. Please accompany information with relevant, hi-res images wherever it is possible

News & Events

Launch of the John Makepeace Prize for Innovation – a £3,000 cash prize for the winning designer

The Furniture Makers' Company drives high standards within the industry, recognising and rewarding excellence with its Design and Bespoke Guild Mark awards. They have now partnered with Britain's best known designer and furniture maker, John Makepeace OBE, who is sponsoring the annual John Makepeace Prize for Innovation to encourage more radical concepts.

New for 2016, this £3,000 cash prize for the winning designer seeks to encourage innovation that exploits new possibilities in design, materials and manufacture. The prize will celebrate the achievement of the designer selected from those awarded a Bespoke or Design Guild Mark, or who have won a Wood Award in any one year. The 2016 Innovation Prize is open to Design Guild Mark entrants for the next awards in May 2016, those awarded Bespoke Guild Marks between March 2015 and March 2016, and those shortlisted in the Furniture category of the 2015 Carpenters' Company Wood Awards. The John Makepeace Prize for Innovation will be judged in March 2016 by an independent panel of judges from the design and furnishing industries.

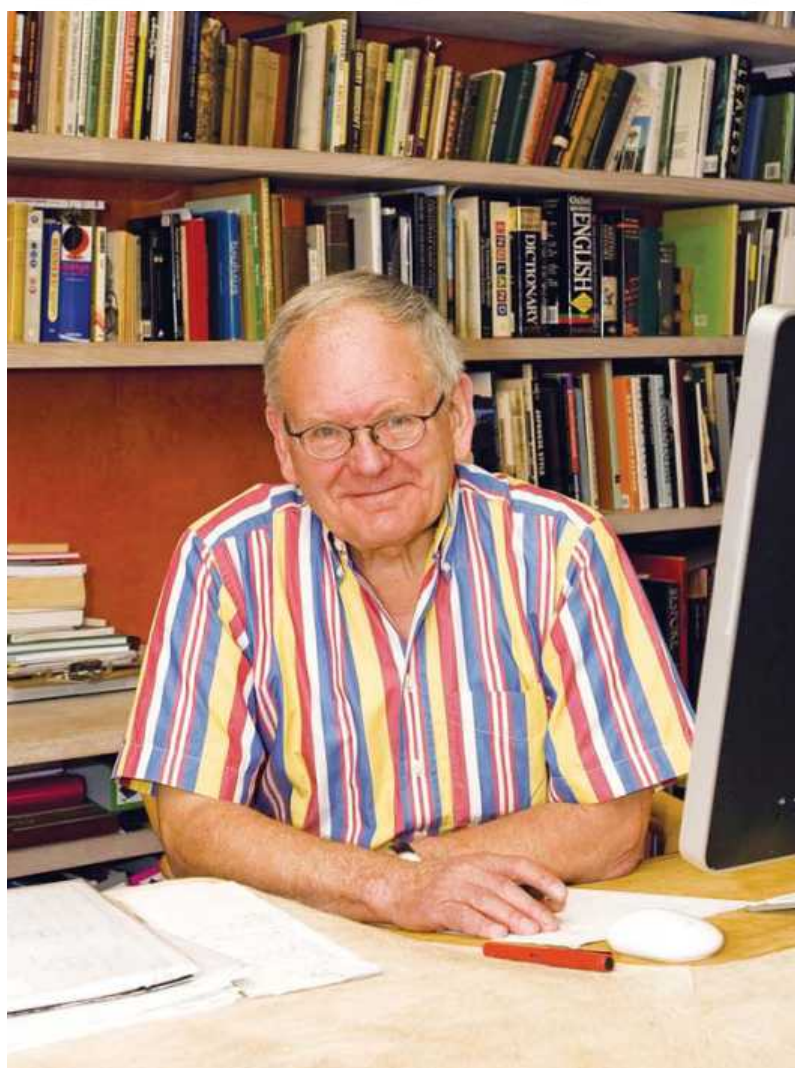
John Makepeace said: "As a designer and a maker, I am constantly trying to evolve more eloquent concepts for furniture. My objective is to achieve freer, lighter, stronger and more sculptural forms better suited to their function and more expressive of what is particular to each commission."

"I have always been fascinated by the interplay of design and technology, exploring processes and materials leading to new possibilities and creating products for current and future generations."

Master of The Furniture Makers' Company David Dewing said: "We are excited about this initiative to drive innovation in the field of furniture design and hope this new prize will prove a real incentive to



The Furniture Makers' Company
the furnishing industry's charity



PHOTOGRAPH COURTESY OF THE FURNITURE MAKERS COMPANY

John Makepeace has partnered up The Furniture Makers' Company

designers, encouraging new ways of thinking and working with radical concepts, materials and new technologies. British design and manufacture is among the very best in the world and we welcome bold thinking to

keep our industry ahead of its competitors."

DETAILS:
Contact: The Furniture Makers' Company
Web: www.furnituremakers.org.uk

Gap in the Sofa

Brits are changing their furniture a lot more regularly than consumer advice suggests, according to new research. A new study by ahf.co.uk has uncovered a large gap in the amount of time we keep our furniture for, compared to the lifespan recommended by watchdog guidelines. Items of furniture and appliances last on average six and a half years less than stated by consumer advice, researchers found when quizzing Brits on their sofas, bedframes, mattresses, washing machines, fridges, freezers, dining tables, boilers, ovens and dishwashers.

While many experts and watchdogs state a freezer should be replaced by residents every 16 years, it was found that they are actually lasting an average of 6.63 years, meaning a difference of 9.37 years between consumer advice and the reality for homeowners.

In further findings, although instructions commonly suggest changing a washing machine every 12 years, the average lifespan of a washing machine Britain is 6.21 years – 5.79 years less than the guidelines. More differences were recorded in fridges – 7.48 years, dining tables – 7.54 years, boilers – 7.54 years, ovens – 8.97 years, dishwashers – 5.50 years – and sofas – 1.38.

The research – which took lifespan averages from advice offered by consumer sites and industry experts such as GoCompare, MrAppliance and The Sleep Council – also showed that furniture and appliances last six



months less in flats as opposed to houses, likely due to wear and tear caused by a higher turnover of residents.

Jonathan Gregory, eCommerce Manager at AHF, said: “It is clear that the guidelines given by the experts have not taken into account the everyday effect that busy homes, with children and pets, can have on our items and with research stating that Brits spent nearly £14bn on new furniture in 2014, it’s important that we ensure no money is lost by having to replace items sooner than expected.

“AHF furniture is built to the highest possible quality and we’re confident that with proper care, our products will last the full term highlighted by the experts. In order to extend the lifespan of furniture and appliances, we recommend they are regularly checked for their working condition, and that stain proofing is considered.”

DETAILS:

Contact: AHF Furniture & Carpets

Web: www.ahf.co.uk

Dovetailors

Yorkshire furniture design firm Dovetailors has launched a new website to sell its latest range of ready-to-buy furniture online.

The company, which designs and manufactures all its own products at Sunny Bank Mill in Leeds, has developed a capsule collection of furniture and shelving that can be ordered direct from anywhere in the UK. Creative Director David Wilson said the move followed a complete overhaul of the company’s manufacturing processes to create a standard range of products that could be produced in small batches alongside the business’ bespoke work.

“It was very important to us that we maintained the profile of our bespoke work alongside our ecommerce business,” said David. “What’s really unique about our online offering is that it gives people the option to buy something exactly as they see it on the website or contact us to enquire about adapting it to their own tastes and requirements. The new site also showcases the firm’s ecclesiastical and commercial work, which David says is a growing part of the business.

“We have completed a number of projects for Wakefield Cathedral and Sheffield Cathedral



Dovetailors has launched a new website to sell its latest range of ready-to-buy furniture

and we have an incredible amount of expertise in heritage and ecclesiastical work. We are also involved in some exciting projects with commercial product developers who team up with us to help them create prototypes and small batches during the design process.”

DETAILS:

Contact: NCFM

Web: www.northernfurniture.org.uk

TIMBER TRADE NEWS Box Tree Moth



The box tree moth is native to temperate and sub-tropical regions of China, Japan and Korea

The box tree moth (*Cydalis perspectalis*) is native to temperate and sub-tropical regions of China, Japan and Korea. It first arrived in Europe in 2007 in the Netherlands and Germany, probably on box trees (*Buxus sempervirens*) imported for the horticultural trade. The first record in the UK was in 2008 and it has now spread widely. Wild box and other species and garden cultivars are all attacked. The brown and white female moths lay clusters of eggs on the leaves, which hatch into green caterpillars with black streaks and white spots. There are two generations per year in the UK, up to four in its warmer native home. The caterpillars defoliate the trees and a severe attack can be fatal. Very little is known about natural enemies and UK predators and parasites have little effect on populations. Chemical control is possible and insecticides based on *Bacillus thuringiensis* crystalline toxin are favoured because they are specific and not damaging to beneficial insects. There is no information on the effect of attack on timber quality, but a non-fatal attack would be likely to reduce vigour, leading to narrower growth rings. There is otherwise unlikely to be any effect on the timber.

Chris Prior



The box tree moth is native to temperate and sub-tropical regions of China, Japan and Korea

Events



Recreation of a living room in 1965 at the Geffrye Museum



A drawing room in 1870 decorated for Christmas at the Geffrye Museum

The Geffrye Museum

Christmas Past: 400 Years of Seasonal Traditions in English Homes

The Geffrye Museum's annual Christmas exhibition returns this year as traditional festive decorations transform the museum's period living rooms, showing how Christmas has been celebrated in Britain over the past 400 years. The exhibition brings to life many of the rich and vibrant traditions of Christmas past, from feasting, dancing and kissing under the mistletoe to playing parlour games, hanging up stockings, sending cards, decorating the tree and throwing cocktail parties. 'Christmas Past' has been mounted at the Geffrye for over 20 years and on-going, original research into the history of Christmas adds a new dimension to the displays each year. This year's accompanying events have a 17th-century theme and include a special open evening with festive music and activities, an 'a capella' concert by candlelight and festive decoration workshops for adults and children. On 17 December the Crafty Fox Night Market

offers visitors the opportunity to purchase design-led, handmade products direct from the makers at this festive evening event. Throughout the exhibition, seasonal food will be served in the café and unusual gifts, cards and Christmas decorations will be available in the shop.

When: 24 November, 2015–3 January, 2016
Where: The Geffrye Museum, 136 Kingsland Road, London E2 8EA
Web: www.geffrye-museum.org.uk

Woking 20th Century & Art Deco Fair

This popular event includes furniture, art, fashion, jewellery and decorative pieces from a variety of eras and styles, including Art Nouveau and Art Deco, as well as vintage items from the 1960s and 1970s. The fair offers a range of good-quality items from English and European makers.

When: 28 December, 2015
Where: Woking Leisure Centre, Kingfield Road, Woking, Surrey GU22 9BA
Web: www.ukvintagefairs.com

Ardingly International Antiques & Collectors Fair

The largest antiques and collectors fair in the south of England is regularly held at the South of England Showground in Ardingly and the first event of 2016 takes place right at the beginning of the year on 5–6 January. Attended by local, national and international dealers and buyers, there are up to 1,700 stalls offering fine antique and vintage furniture as well as thousands of other decorative items.

When: 5–6 January, 2016
Where: South of England Showground, Ardingly, near Haywards Heath, W. Sussex RH17 6TL
Web: www.iacf.co.uk/ardingly



Record Power Show at Toolite

Open from 10am–4pm on 4 December and 10am–3pm on 5 December, 2015 Record Power will be on hand to answer your questions at the show and will be demonstrating products from their extensive range. In addition, exclusive show deals will be available on the day, making this an event not to be missed!

When: 4–5 December, 2015
Where: Unit 3/2 The Mews Brook Street, Mitcheldean, Gloucestershire, GL17 0SL
Email: toolitesales@tiscally.co.uk
Web: www.recordpower.co.uk

Meet Green Father Christmas

On the weekends of 5–6, 12–13 and 19–20 December, 2015 the Weald & Downland Open Air Museum are welcoming a very special guest to the Museum – Green Father Christmas (Old Winter). Seated in his chamber, traditionally decorated with seasonal greenery, Old Winter will be selecting presents from a large wooden chest to give to each child that he meets. Every child will receive a traditional wooden toy wrapped in brown paper and string.

This is a ticketed event, so be sure to book soon to avoid disappointment!

When: 5–6, 12–13 and 19–20 December, 2015
Where: Weald & Downland Open Air Museum, Singleton, Chichester, West Sussex, PO18 0EU
Contact: Weald & Downland Open Air Museum
Email: office@wealddown.co.uk
Web: www.wealddown.co.uk



Traditional Chilterns Christmas

Traditional Chilterns Christmas

On 5 December, 2015 Chiltern Open Air Museum is opening especially for a festive traditional Christmas weekend. With opening an opening time of 11am–4pm, last admissions will be at 3pm.

With something for everyone, see Father Christmas in his grotto and receive a gift – £3.00 per child, see the historic buildings festooned in traditional Christmas decorations and take part in Christmas crafts. There is also the opportunity to meet costumed re-enactors making preparations for a Regency Christmas and to hear folk singers singing traditional songs and music. Enjoy warm mince pies, spiced apple and hot drinks in Chiltern Open Air Museum's tea rooms, within the beautiful Buckinghamshire setting.

When: 5–6 December, 2015
Where: Chiltern Open Air Museum, Newland Park, Gorelands Lane, Chalfont St Giles, Buckinghamshire, HP8 4AB
Contact: Chiltern Open Air Museum
Email: enquiries@coam.org.uk
Web: www.coam.org.uk

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CMT Shear Rebate Cutter Block



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CMT part no:694.100.30

These cutter heads have been designed for rebating from the top or the bottom. The hard aluminium alloy body is dynamically balanced for smooth high quality finish and has a high resistance to tensile and yield stress.

Special Offer is for 30mm bore only

CMT Combi Rebate & Limiter



£100

CMT part no:694.020.30

These cutter heads have been designed for using standard Euro limiter cutters and also integrate reversible tungsten knives on both edge and top to give a superb finish when rebating on top or bottom of the block. *Special Offer is for 30mm bore only*

CMT Spiral Planing Block HD



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CMT part no:694.019.30

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CMT part no:694.008.30

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Stourbridge furniture-makers join army of helpers on DIY SOS's veterans' project

Two best friends from West Midlands-based company 101 Furniture jumped at the chance to put their design and building skills to the test for a special episode of long-running BBC1 series *DIY SOS*.

Furniture-makers David Perry and Jamie Wood were among an army of volunteers, which included two Royal contributors in the shape of Princes William and Harry, that pitched in to help the show's host Nick Knowles and the BBC team transform a street in Newton Heath, Manchester. The aim was to turn rundown properties into homes for former soldiers and their families.

"We were approached late into the project on the off-chance we could help to supply some garden furniture," explained Perry. "Once we were aware of the project's aims to raise awareness, and the veterans and their families who would benefit, we were nothing short of honoured to be involved."

Former Stourbridge College students Perry and Wood are from 101 Furniture, which started last year and specialises in custom-made industrial-style furniture made out of reclaimed timber and steel. They donated a large outdoor dining table and benches set with a bright yellow frame to the ambitious building project, which was broadcast on BBC1 in October, as well as a four-seater garden bistro table with matching stools.

"The garden was designed and project managed by Adam Frost, winner of seven



David Perry (left) and Jamie Wood were among those who answered presenter Nick Knowles' call for help



The yellow-frame table and bench set 101 Furniture contributed to the BBC project

consecutive RHS Chelsea Flower Show medals, so we pulled out all the stops," revealed Perry. "We worked 18-hour days to deliver a pallet full of tables, stools and benches ready for the reveal day of the programme."

Along with many other trades, Perry and Wood helped to renovate several houses and build a training and counselling centre for the veterans, some of whom had fought in Iraq and Afghanistan and had post-traumatic stress disorder.

"The level of sacrifice these veterans gave to ensure the safety of not only our communities but communities across the world is so admirable it is our duty to ensure they have a safe, accommodating and positive environment to recover," insisted Perry. "We hope our small addition to this mammoth project will help because the guys we met on the grand opening were a true inspiration to us all here at 101."

Portable innovation brings sound success for Hertfordshire firm

Hertfordshire furniture-maker Benedict O'Boyle has revealed how his six-year-old daughter inspired him to make a stand for the family's iPad and helped to create a new income stream at the same time.

"I started developing iPad stands after Santa gave the family an iPad for Christmas," said O'Doyle. "I wanted to get our new tablet out of Layla's hand, while she was dancing to the music playing on it. I used half a log and cut a groove in it, creating a simple dock."

"The iPad got louder when we put it in the log. I realised the sound was resonating through the timber and this was causing an increase in the volume and an improvement in the sound quality, completely naturally."

Further refinement of the stand led to the creation of the iWood-AMP, a solid piece of wood which is portable and wireless, with a uniquely designed sound-box to project and increase the speaker's output, increasing both the volume and the sound quality. No batteries, wires, plastic or components are required.

The revenue from the iWood-AMP has been a valuable income stream for O'Doyle's handcrafted furniture business, Benedict's Fine Furniture, which he launched in 2005.

"When I'm working with wood I feel like I'm transforming one of Mother Nature's creations into something new," expanded O'Doyle, who graduated from Bucks New University with a degree in Furniture Design and Craftsmanship.

"My designs must always be functional and they must be beautiful like the trees they

came from. My products must also be practical, have form and be innovative.

"Creative carpentry isn't an easy job – physically hard and mentally challenging on a daily basis – but it comes with a lot of satisfaction and for me I honestly can't think of anything I'd rather do for a living."

For more information, visit www.iwood-amp.com.

The iWoodAMP in oak (*Quercus robur*)



Benedict O'Boyle developed a secondary income stream with a creative new product

PHOTOS COURTESY OF AMOFONT.COM

Talented duo bag design awards at Young Furniture Makers exhibition

PHOTO COURTESY OF THE NATIONAL FURNITURE MAKERS COMPANY



Connor Holland (left) is congratulated by Festool's Stephen Bagshaw

The industry's stars of the future were out in force at the recent Young Furniture Makers' exhibition, with two rising talents scooping top spot in new awards categories.

Connor Holland won the Young Furniture Makers Bespoke award, while Christa Sylvana Tjong secured first place in the Young Furniture Makers Design section.

Holland, along with Jan Waterston, was also awarded Best in Show. They both won an all-expenses paid trip to sponsor Blum's state-of-the-art factory in Austria.

"We are always eager to support young talent in our industry," said Mark Richardson, managing director of Blum UK, "and we are thrilled to be able to support this event."

Awards were also made for numerous industry partnerships, where companies such as Crofts & Assinder, Ercol, Hands, Gordon Russell and Willis & Gambier worked with university students on specific projects. Alan Styles, sales director of the event's leading sponsor Axminster, said: "We are always keen as a company to support educational organisations and events. Exhibitions such as this are important in recognising and rewarding the efforts of students who are vital to the existence and continuation of our industry."

For more information about the awards and The Furniture Makers Company, go to www.furnituremakers.org.uk

If you're a member of a collective and would like to raise your profile then submit a story to derekj@thegmcgroup.com

Editor's round-up...

Having trouble sourcing the right tool for the job? Derek Jones sets about identifying the essential tools and equipment on offer this month

All sterling prices include VAT, correct at time of going to press

I've accumulated a number of old tools over the past few years and noticed the other day that I wasn't far short of having enough to build an entire project with them. There are a few essentials missing, such as layout tools, but when it comes to marking and measuring I'm much happier using new ones of these. It certainly wasn't my intention to build a complete set, it's just the minute people cottoned on to the idea I was 'collecting' they couldn't help but become scouts. It's quite apt really considering the process I go through each month to find things to put into your tool boxes. Nearly all of these tools required some kind of attention to get them up to scratch, which has definitely been half the attraction and in the process I've let a few go when I've found a better version of the same tool. I can't offer that much help if you fancy doing something similar, other than keeping your eyes peeled because you never know where the next gem will turn up. It seems appropriate then that the project I have in mind is a tool chest in which to put them. It may have to be a simple affair but it will be a real test to see if I can actually put them back into use. You can see how this develops in the next issue.

Fortunately none of the tools we have selected for you this month require any more than a cursory tidy-up to get them bench ready, so without further delay here they are.

UJK Technology mini pocket hole jig

The new UJK Technology Pocket Hole Jig has a multitude of uses. While it may be small, it is still able to create strong, accurate joints quickly and simply and it fits in the pocket.

The user can make a quick and clean hidden joint without the added task of having to clamp a glued joint. The project can be assembled all in one without any wait time which is ideal for kitchen fitters on a schedule. Due to its size, the mini jig also makes an excellent tool for furniture restorers, fitting into tricky spaces when it may be preferable not to dismantle the piece of furniture. It is an excellent tool for use in restoration and can be used to strengthen drawers or shelving.

Small and neat, this portable jig allows you to make pocket hole joints easily, on site or in situations where a standard jig is too large. It incorporates some unique features.

PHOTOGRAPH COURTESY OF SMC/DEREK JONES



Wooden bodied planes are so much easier to tune up than metal ones if you can find one that's worth the trouble

A magnetic insert helps hold it in place while clamping. A dovetail recess allows you to securely link two or more jigs together for wider joints. Pocket hole joinery combines speed and simplicity. The joints are strong,

accurate and hidden, and it will join material from 13mm to 100mm thick. The jig is designed and made in Axminster, Devon and comes with a Lifetime Guarantee from the manufacturer. Valid until 31 December, 2015.



£14.96

Rockler drill press fence



£69.99

Rockler Woodworking and Hardware has introduced a new Drill Press Fence featuring a specially designed dust port that is angled to the side, minimising interference with the drill post and providing up to 3in of extra clearance compared to others on the market. The Drill Press Fence can be fitted to many existing drill press tables and includes a free plan for those who opt to build their own.

Until now, drill press dust collection has been an afterthought, resulting in awkward and cumbersome setups that interfere with the work area of the table. The new Drill Press Fence dust port,

which fits 2½in dust hose, is angled upward and off to the side, keeping dust collection components clear of both the work area and the drill post. This allows easier setups and manoeuvrability on the table surface.

The Drill Press Fence is composed of an aluminium backbone and adjustable ¾in melamine-coated MDF faces. The included flip stop can be anchored anywhere along the top T-track for repeatable drilling setups. The Drill Press Fence can be mounted to drill press tables via T-tracks or thru-slots and quickly positioned and secured with the included hardware.



WOLF Combat Tool

In time to make the perfect Christmas gift, WOLF Tools has introduced its new 'Combat Tool' – a durable and competitively priced oscillating multi tool, designed for DIYers and Professionals alike.

The WOLF 'Combat Tool' is ideal for sawing, cutting, sanding, grout removal and scraping. Its versatility and compact size make it perfect for trimming skirtings and laminate flooring, cutting copper or plastic pipes in inaccessible places, cutting square holes in plasterboard for recessing electrical boxes, cutting ceramic tiles and removing old grout. With the wood cutting blades provided it will make easy work of fitting door locks, hinges and can even trim the bottom of a door while still mounted in the door frame!



£89.99

Veritas Honing Guide set

The new Veritas 5 Piece Deluxe Mk.II Honing Guide set is one of the most versatile sets ever produced. The new Veritas 5 Piece Deluxe Mk.II Honing Guide set includes both the standard and narrow blade clamping heads, as well as the angle registration jig, straight roller base and camber roller base. Combined, the heads accept blades ranging from 3mm to 73mm wide.

The bases offer the options of straight or slightly cambered edges on your blades. The completely predictable results this set offers for a wide variety of blades makes it one of the most useful sharpening aids in

the workshop of anyone who works with hand tools. All prices include VAT and are valid until 31 December 2015.

If you don't need the full set, then you can buy some of the parts separately:

- Veritas Mk. II 3 piece narrow blade honing guide set consisting of the narrow blade clamping head, the standard roller base and the angle registration jig and priced at £84.95

- Veritas narrow blade clamping head only priced at £49.96



£124.96

FireWriter from Antex

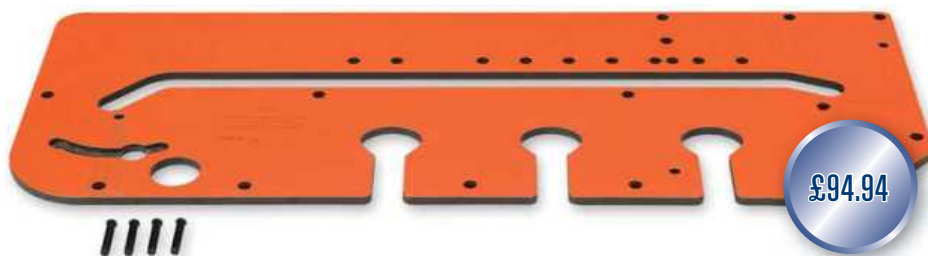
Decorate wood; leather or other materials through the careful application of heat with this precision tool. If you are serious about pyrography, this powerful new tool from Antex is easy to use with multiple heat settings, quickly rising up to 650°C. Designers can use the various temperatures to create different shades from very light, to a much deeper burn or heavier in fills.

FireWriter is ergonomically designed for comfort over long periods with a slim handle and easy to change tips. It comes with a writing tip and 5 nickel chrome wires of different thickness to make your own tips. Accessories are also available including pens with different tips, packs of specialist tips and, a separate splitter means you can switch between two pens quickly.

All kinds of designs are possible, with a little creativity you can achieve wood burning, acetate stencil cutting, leather crafting, heat stamping, pattern transfer, personalising items, hot knife cutting and soldering using different tips.



£149.99



£94.94



£69.95



£89.95

Compact lock jig

This adjustable lock jig is made of 12mm thick high pressure laminate, dimensionally stable and comes with a lifetime guarantee never to warp. It is fully adjustable for locking faceplates up to 175mm in length. The jig includes four interchangeable templates to cut mortise and faceplate recesses for the most popular door sash, mortise and deadlock sizes.

Setup is easy by marking the centreline of the door and the centreline for the lock. The mortice will be parallel with the door face ensuring that the parts are then square, making it easier to fit the handles.

It is suitable for doors up to 58mm thick. The user will require a 1/2in router with a 12.7mm straight cutter – long reach if possible – and a 16mm guide bush. Additional requirements are two clamps to hold the jig in place and a screwdriver to adjust the settings. Valid until 31 December, 2015.

Hinge jig with clamp plate

This single aperture hinge jig is lightweight, easy to use with minimal setup time and suitable for all doors. Once set for the size of hinge, cutting the recess on the door frame requires no further adjustment. Its body has engraved markings for easy measurement and setting, and this jig gives quick and accurate results.

Made of 12mm-thick, high-pressure laminate, the hinge jig is dimensionally stable; additional parts are made of aluminium. It is suitable for hinges from 50mm to 127mm long and with leaf widths between 6.5mm and 35mm. The end datum stop controls the 3mm gap between the top of the door and frame. The jig comes with the clamping plate accessory and easy-to-follow, step-by-step instructions. Additional tools required are a 1/2in router, 12mm straight cutter, 16mm guide bush, screwdriver and two bradawls or two clamps. Valid until 31 December, 2015.

Variable angle worktop jig

This single jig is capable of 45° and 90° left- or right-hand joints in worktops with widths ranging from 250-700mm. It enables the user to make peninsular joints, 90° square end cuts plus 45° and 22.5° angle cuts. The jig is CNC cut from 12mm thick solid compact laminate. Permanently engraved into the top are instructions, diagrams and pin-hole locations.

This professional patented worktop jig is also able to solve problems regarding out-of-square joints. With the addition of the optional accessory – the angle adjustment plate – the jig will cut accurate left – and right – hand joints between 85° and 95°. The angle adjustment plate sits in the slot provided and adjustment is made to change the angle of the male joint. With the addition of the plate, you can use the jig to find and set the angle required ensuring a perfect joint every time.

The user will need a 1/2in router, 12.7mm (1/2in) x 50mm router cutter, 30mm guide bush and two clamps. Valid until 31 December 2015.

GKS 165 Professional and GKS 55+ GCE Professional hand-held circular saws

The new GKS 165 Professional and GKS 55+ GCE Professional hand-held circular saws from Bosch provide more cutting depth with the same saw blade size. Both saws are fitted with powerful motors that ensure a fast work rate. The GKS 165 Professional has 1,100 watts of power and the GKS 55+ GCE Professional 1,350 watts. The latter is also equipped with Constant Electronic and six-stage speed pre-selection.

It therefore maintains a continuous speed even when making deep cuts and is suitable for cutting different materials from wood, to soft metals through to heat-sensitive plastics. All the tools feature an integrated brake function which stops the blade within seconds when the tool is switched off, protecting the user and material.



MASCOT® WORKWEAR catalogue

MASCOT launches a new main catalogue on 436 pages featuring over 600 products – a record number of products. Three new ranges are presented, as well as new products to supplement the existing ranges. The catalogue focuses on sublime durability, optimal freedom of movement and comfort in any weather. The recurring theme in this year's catalogue is MASCOT celebrating the passion and enthusiasm for workwear.

MASCOT's catalogue addresses a wide

segment of industries, whether it be construction, trade, service, industry, production, logistics or offshore. After each chapter, the products are compiled and categorised by colours, making it easier to choose products for your industry or company colour. Following the introduction of the ranges, MASCOT presents the 'Mix and Match' concept; a tool to combine MASCOT's products across ranges and colours to fit personal style and company requirements.



Contacts

Compact lock jig

Contact: Axminster Tools & Machinery

Tel: 03332 406 406

Web: www.axminster.co.uk

FireWriter from Antex

Contact: Antex

Tel: 01822 613565

Web: www.antexcrafter.com

GKS 165 Professional and GKS 55+ GCE Professional hand-held circular saws

Contact: Bosch

Tel: 0711 400 40990

Web: www.bosch.com

Hinge jig with clamp plate

Contact: Axminster Tools & Machinery

Tel: 03332 406 406

Web: www.axminster.co.uk

MASCOT WORKWEAR catalogue

Contact: MASCOT

Tel: +45 8724 4820

Web: www.mascotworkwear.com

Rockler drill press fence

Contact: Rockler Woodworking and Hardware

Web: www.rockler.com

UJK Technology mini pocket hole jig

Contact: Axminster Tools & Machinery

Tel: 03332 406 406

Web: www.axminster.co.uk

Variable angle worktop jig

Contact: Axminster Tools & Machinery

Tel: 03332 406 406

Web: www.axminster.co.uk

Veritas Honing Guide Set

Contact: Axminster Tools & Machinery

Tel: 03332 406 406

Web: www.axminster.co.uk

WOLF Combat Tool

Contact: UK Home Shopping

Tel: 0330 123 0001

Web: www.ukhs.tv

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4" BELT/
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SANDER

CS4-6D

- Dust extraction facility
- 4" x 36" belt tilts & locks 0-90°
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- 1 Hp/ 230v/ 1ph motor

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8" DISC
SANDER

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EXC.VAT
£167.99
INC.VAT

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Clarke

1" BELT & 5" DISC SANDER

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CBS1-5

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- Powerful, bench mounted disc sander • 900W
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6kW

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- Dual purpose, for both finishing & sizing of timber

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- Ideal for cross cutting, ripping, angle and mitre cutting
- Easy release/locking mechanism for table extensions
- 0-45° tilting blade
- Cutting depth: 72mm at 90° / 65mm at 45°
- 230V/50Hz, Motor: 1800W, Shown with optional leg kit

CLK5 £22.99 exc.VAT £27.59 inc.VAT

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TABLE SAW WITH EXTENSION TABLES (250mm)

- Ideal for cross cutting, ripping, angle and mitre cutting
- Easy release/locking mechanism for table extensions
- 0-45° tilting blade
- Cutting depth: 72mm at 90° / 65mm at 45°
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The making of a classic Steinway

Keith Cheveralls gives us a unique insight into the making of this extraordinary and rare Louis XV-style Doheny Steinway piano

In May of 2007 representatives of Steinway & Sons, the legendary American maker and purveyor of fine pianos, visited the studio workshop and home of master carver, Dimitrios Klitsas. There, perched high atop the hilly terrain of rural western Massachusetts, they talked with Dimitrios about the possibility of a highly specialised and unique commission – creating a copy of a much earlier Steinway & Sons masterpiece known as the Doheny Steinway. The company was familiar with the depth and breadth of Dimitrios' experience as a fine woodcarver and sculptor, but a whole piano almost from scratch?

The task

All original plans and drawings of the piano had long since disappeared, so Dimitrios would be responsible for executing the entire carving project, including all new re-design and drawing work for the carved features, and would be aided only by very old photographs found in a Steinway book. For Steinway's part, they would deliver to Dimitrios' studio, a mahogany piano case to his exact specifications. The case was to arrive replete with metal frame and inner workings, all mounted on a custom built adjustable and movable carver's frame.

Gilding

As Dimitrios awaited delivery of the actual piano case, he was able to begin the project by carving the legs, pedestal, and music shelf. The pedestal and music shelf were, essentially, of standard grand piano dimensions. Scaling and fitting the designs to each was relatively straightforward. It was here, however, that the carver's skill and eye were to be first tested.

The entire project was to be gold leafed, requiring a perfectly smooth finish be left 'from the chisel'. Gold leaf is so thin, fragile, and reflective that it highlights any surface imperfections. Additionally, for the true beauty of the carving to shine through, it was critical that all lines and edges be ultra sharp and crisp.

Legs

The five supporting legs of the piano were to be carved by Dimitrios' son, Spiro. The placement of these legs created one of the biggest challenges of the project.

Piano legs are always removable. The design called for the legs to flow smoothly



Dimitrios with the plan drawing of the music shelf

and precisely up into the matching shell and scroll elements on the case itself. To meet this challenge, the leg and case carvings were precisely designed and carved to create the visual effect of being a one-piece construction.

Dimitrios and Steinway were to spend much time and effort together working out specific construction tolerances, ultimately allowing a minute overlap of less than 0.8mm ($\frac{1}{32}$ in) in order for everything to invisibly mesh together.

Frame work

The piano case arrived at Dimitrios' studio on its heavy metal mobile carving stand. Steinway craftsmen had constructed the curvaceous casework to exacting standards using forms and epoxy laminated sheets of 3mm ($\frac{1}{8}$ in) thick mahogany (*Swietenia macrophylla*) for a total thickness of 16mm ($\frac{5}{8}$ in).

Much of the carving on the 5.18m (17ft) casework features individual frames to house period art, painted directly onto the gold leaf. Though these decorative frames have the appearance of appliqué work, they were actually carved firmly in situ.

Steinway cleverly used the same forms from the case to exactly replicate the inside curve of the frames, to precisely match the curve on the case where they were to be located.

Again, 3mm ($\frac{1}{8}$ in) pieces of mahogany were laminated to create sufficient height,

width and depth to accommodate carving of the flowing floral design.

The same technique was used for all of the other features on the case itself, including the locations for the legs. Again, sharpness of detail and a near perfect finish from the chisel were essential for the carving to work with the gold leaf.

Cherubs

The busts of the two cherubs seen at each end of the keyboard, were executed after the case work carving had been completed, but while the piano was still with Dimitrios in his Hampden studio. This was done so that they could both be carved in proportion to the overall project and, specifically, to their final location on the keyboard ends. Both busts are individual sculptures and were carved entirely by eye from pictures provided by Steinway.

The work of an artist

With all the carving work completed on schedule, arrangements were made by Steinway to move the piano some 300 miles to upstate New York where the gold leaf was to be applied. Thereafter, the separately commissioned artist spent some time painting the individual period panels.

The finished 21st-century Doheny Steinway was delivered to Steinway & Sons, New York facility on 1 January 2009, before being delivered to its final destination.

PHOTOGRAPHS BY KEITH CHEVERALLS AND DIMITRIOS KLITSAS

Looking back over the project Dimitrios is quick to emphasise only a sense of humility at being selected by Steinway to work with them and other very talented artists in recreating such a masterpiece. Yet, not far from the surface, must surely be a hard earned sense of pride in doing something that in reality, he has been working toward all his life. Like others of his generation and skill, the ability and passion to proceed toward such fine work

as the Doheny Steinway project are many, many years in the making.

An anonymous poem hangs on the wall of the studio where the project was carved:

*He who works with his hands is a labourer,
He who works with his hands and his head
is an artisan,
But he who works with his hands, his head
and his heart is an artist.*

Author unknown

The carving world is indeed fortunate to have those with the resources to fund such projects. The world is yet more fortunate to have many who strive to attain the skill, knowledge and passion to create great works for another generation to appreciate their artistry. We can only hope that all who have the good fortune to hear the wondrous sound of the Doheny Steinway played, will also see the passion of the artists who contributed to this project. *F&C*

About Dimitrios



Dimitrios Klitsas was born in 1948 in Vatatathes, northern Greece. At the tender age of 13, he was despatched to Ioannina Technical School for four years of study, and placed in the woodcarving department under the tutelage of Angelo Moshos, a Greek Master Carver. Here he was encouraged to combine critical technical skills, with the more subtle mastery of designing his own work. Most projects had to be drawn free hand and directly onto the wood. Angelo's teaching methodology followed a logical progression from simple projects to more complex relief, architectural and sculptural work. Dimitrios follows exactly the same method in teaching his own students today.

In 1966, Athens and independence beckoned. Dimitrios took work wherever and whenever he could find it, involving mostly the execution of varied projects for other well-established and respected carvers of the time. The value here, as Dimitrios explains, was to look, learn and work for some of the finest designers and craftsmen in Greece. This nomadic work-based life-style went on until Angelo Moshos arrived in Athens to set up his own carving business, and immediately hired Dimitrios. With Angelo now acting as mentor, Dimitrios was charged with designing and creating carved furniture and architectural features for his master's new house. He was encouraged to seek inspiration for designs everywhere from traditional Greek architectural works, to the decorative carvings of Grinling Gibbons. Dimitrios acknowledges that those five years were the most important and influential experiences of his career.

In 1971, Dimitrios set up his own carving business in Athens with an old school friend, specialising in carving period furniture, primarily in the style of Louis XV.



Side view showing panels and shell for one of the legs



View of the keyboard complete with period panels, and the beautifully carved and gilded music shelf



An exquisitely carved lyre forms the support for the foot pedals



The finished Doheny Steinway piano

The original Dohney Steinway

The original piece on which this Steinway was based, was carved around the turn of the 20th Century in the style of Louis XV, featuring ornately carved decorative floral motifs wrapping around the entire piano case. The intricate floral theme for these panels continues into the music shelf, piano bench, lyre and five ornately carved supporting legs cleverly concealed in their connection to the main frame by overlapping shells. Finally, at each end of the keyboard sit two individually sculptured children's busts.



Much of the casework features decorative carved frames with period characters painted by the artist Rick Muto



A detailed view of the carved keyboard end, before gilding



The finished leg located under the case shell

Quality time

Editor Derek Jones explains why he was only too happy to linger over the masterpieces at the fifth 21st Century Furniture Series

PHOTOGRAPHS BY DEREK JONES



One of my favourite shows on the circuit is undoubtedly the 21st Century Furniture Series. The fifth show in this biannual event, held recently at The Millinery Works in Islington, north London, was again curated by Martin Grierson. His reputation within the world of fine furniture making is verging on legendary, so visitors were expecting work of the highest standard. And Grierson delivered. The list of exhibitors read like a who's who of the best finest craftsmen in the UK and to have them all in one place at the same time was nothing short of a masterclass in detail.

Among the masterpieces on display was Waters & Acland's 14-12 chair – inset, which we featured in last month's *F&C*. We had been in no doubt at the time that it took a good picture but in the flesh it was even more impressive and a lot bigger than I was expecting. All in all, the 21st Century Furniture Series V exhibition was the best advert for contemporary furniture makers in the UK that I've seen for a long time, although with Grierson holding the reins that was hardly surprising.

Here, I've selected just a few of the impressive items that caught my eye...





Rupert Phelps' sideboard – main image – was one of the most interesting pieces for me. He managed to capture the essence of the mid-century-modern style currently in vogue. The drawers are on metal runners, which is likely to offend the purists, but it's a good, honest design for a purpose – and presumably budget – that's none the worst for it. A good example of what a mass-produced item could be. The stylistic details are not too obvious but lift it beyond that of merely functional.



Edward Wild had three pieces in the show. Like Phelps' sideboard, Wild's compositions – above – aren't tricky, but just exquisitely carried out. Straight-grained timber can send a powerful message in the right hands and his jewellery box was one of the finest I have seen in a long while.

One of the first pieces you noticed when you walked into the main gallery was a console table by Waywood – below. It didn't scream out at you but there were so many hidden treasures in this piece that it was hard to know where to begin.

There are chamfers, curves, tapers and an unexpected shift in volume that make it perhaps the most subtle of pieces you will ever see.



Simon Smith's solid maple and pear veneered chest of drawers – below – is a fine example of contemporary furniture. The drawer construction – inset, right – was just one in a line of intricately constructed pieces. The concealed runners built into the drawer bottom – inset, below right – are a legacy of Parnham where Smith trained under the watchful eye of Robert Ingham. Ingham is the only other maker I've seen using this technique which isn't surprising as he is perhaps responsible for introducing it to our repertoire of techniques.



Waring Robinson is a self-taught cabinetmaker. His collector's cabinet – right – featured interesting stylistic details. There's a hint of entomology about the pulls on his drawers – above – that links to a bygone age when we were happy to put bugs in boxes.



Neal Crampton's sideboard – right – was a brave choice of material for such an exhibition. Soft woods are often judged inferior as a statement timber but this piece should get you thinking. It wasn't just the striking grain that caught my eye, his clever use of tapered dovetails, loose-fit T&G and wedges – below – was technically very clever as well as easy on the eye.



Simon Smith's second piece – right – took the prize for the most stunning veneers in show. The flame mahogany panels were mesmerising and looked like they were in soft focus against the crisp boarder of a walnut framework; no inlay, no moulding, just natural timber thoughtfully juxtaposed. And who wouldn't want to see those drawer bottoms – above – every time you opened them?



We've featured Young & Norgate in *F&C* before but this is the first time I've seen their work in the flesh – above and right. It's clean, well finished and with a modern twist. It's good to see a modern material like Formica sitting happily alongside some very precise cabinetwork. *F&C*



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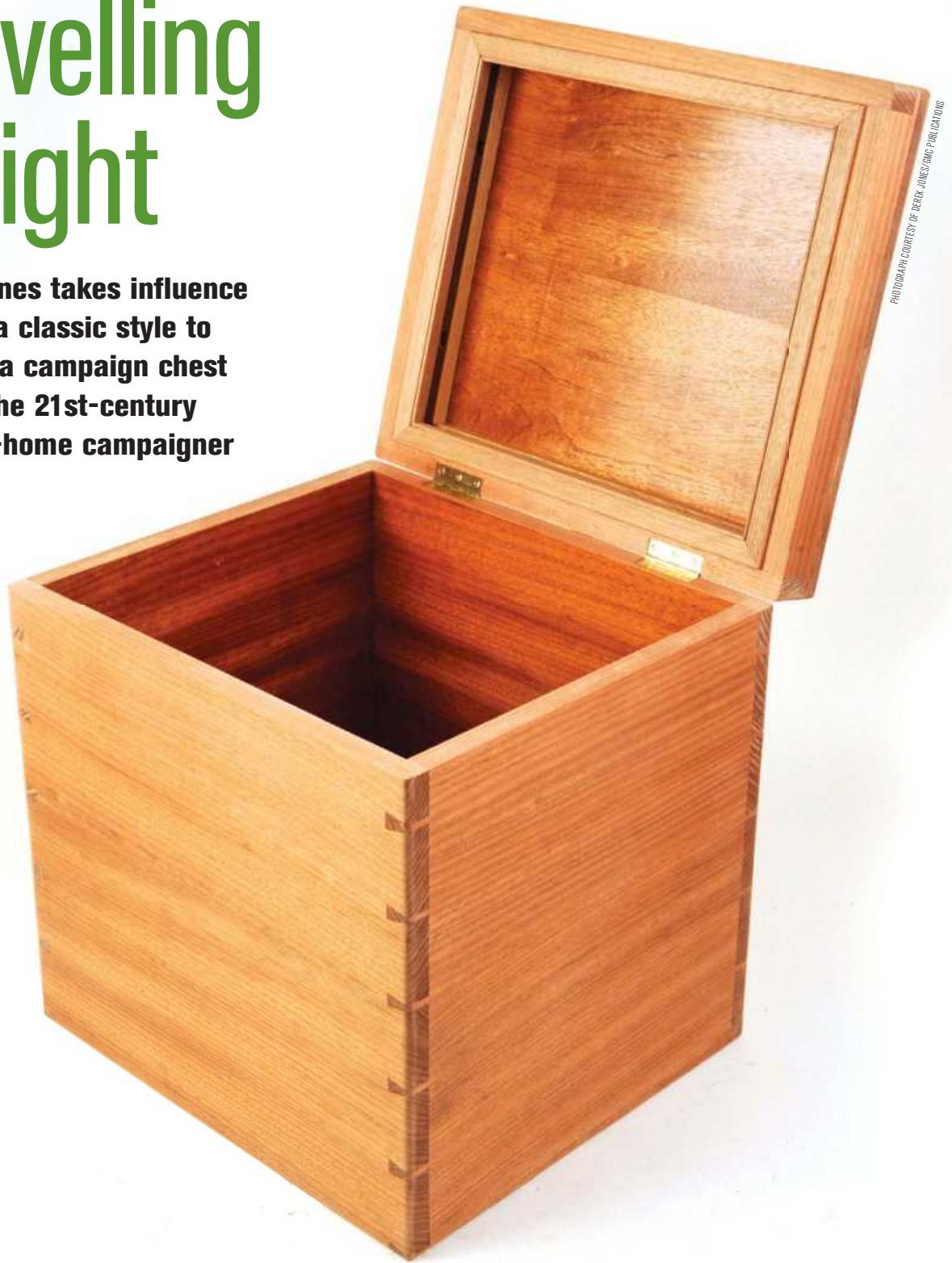


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Travelling light

Derek Jones takes influence from a classic style to create a campaign chest for the 21st-century stay-at-home campaigner



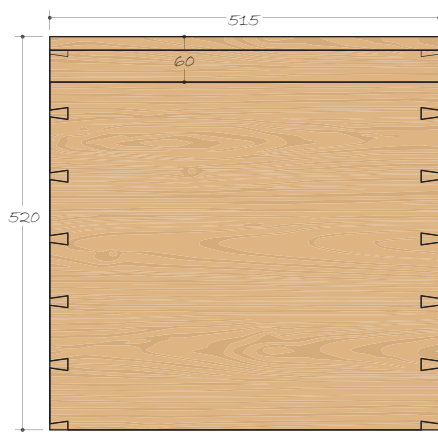
PHOTOGRAPH COURTESY OF DEREK JONES/ONE PUBLICATIONS

Off the top of my head I can probably list half a dozen or more woodworking metaphors that are in everyday use, by people who aren't necessarily woodworkers. Don't worry, I'm not actually going to list them all now. Instead I'm going to share with you a project that is in itself a 3D metaphor for woodworking projects in general. At first glance this campaign-style chest is merely a cube-shaped box held together with some traditional-style joinery. Under the surface, however, there are a few twists that make it a box more suited to the stay-at-home campaigner and therefore a

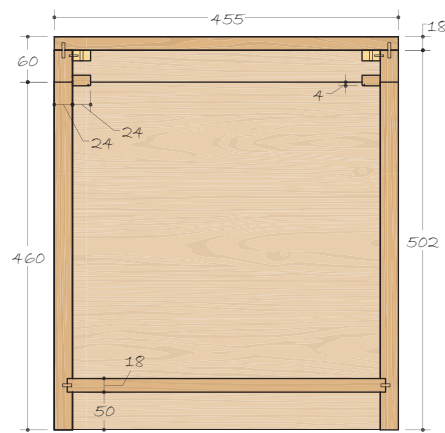
more appropriate facsimile for modern life.

Strictly speaking, the term 'campaign furniture' relates more to a style than any particular period in history, although like all things there is a start and an end. It was designed with a purpose in mind and not always with an eye for the latest fashion. For that reason it's possible to find pieces that fall into this category dating from the early 1700s right up to the middle of the 20th Century taking into account Georgian, Regency, Victorian, Edwardian and even Art Nouveau. There are some key factors that determine the style and generally

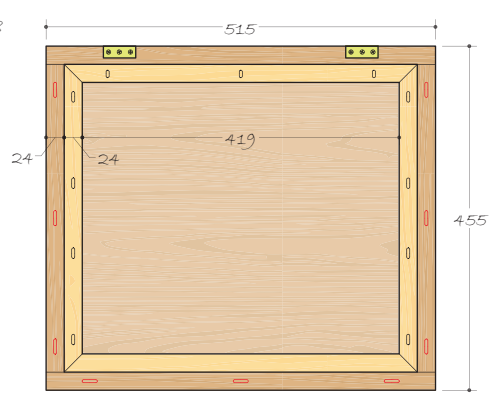
they can be linked to a handful of specific qualities; portability, robustness and utility, none of which was used to restrict the form of contemporaneous pieces. It was these qualities, however, that I wanted to include in my version of the traditional campaign chest. Campaign furniture is full of simple but effective solutions and from that perspective alone it's a way of working that has a lot to offer in terms of basic construction methods. The joinery may appear simple, and it is, but the execution must be sound and that's as good a place as any to start a build. ➤



FRONT ELEVATION
Scale: 1 to 10

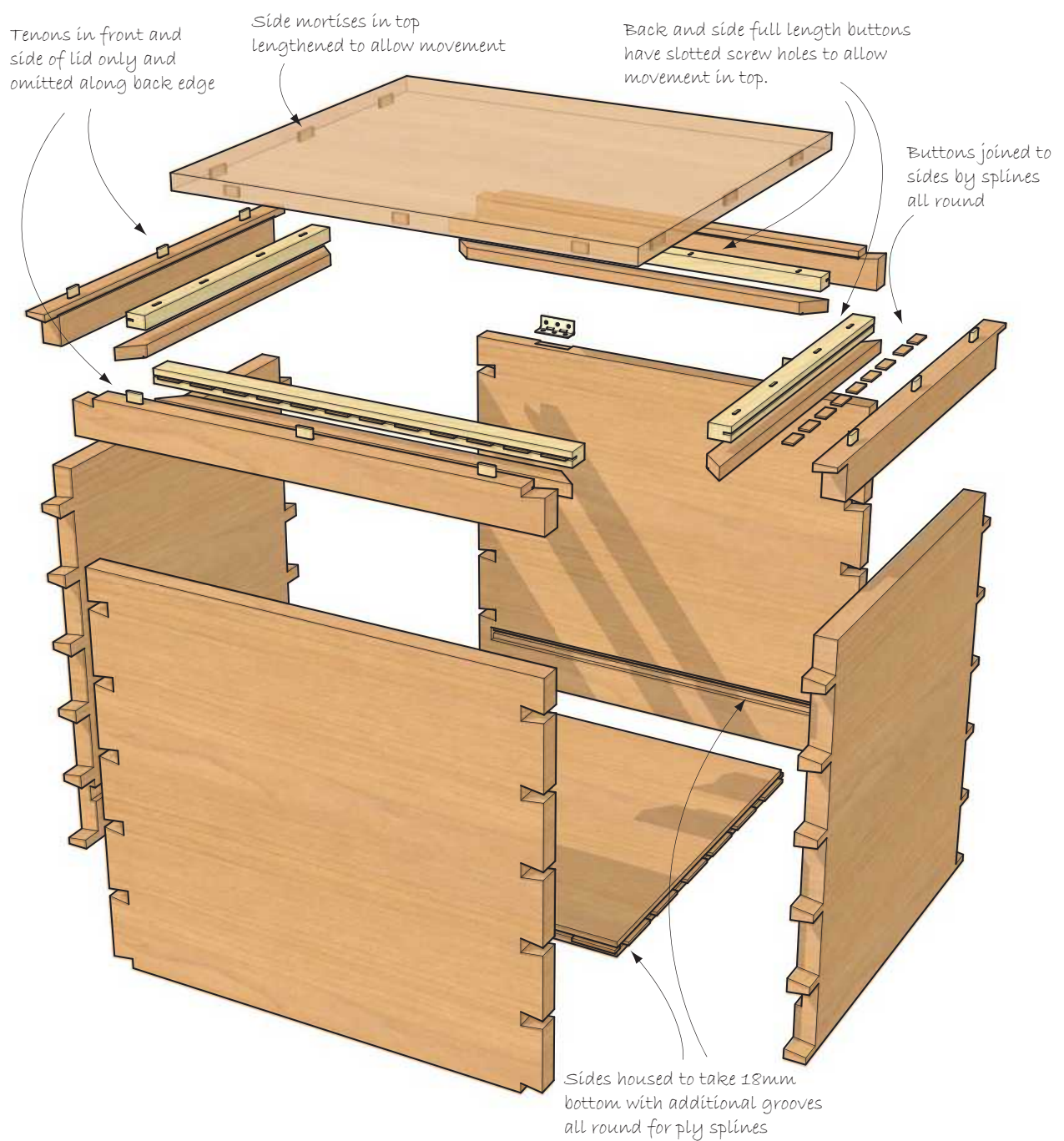


SECTION
Scale: 1 to 10



Red outline shows position of tenons into lid, front and sides only

PLAN (at lid level)
Scale: 1 to 10



Get set for square

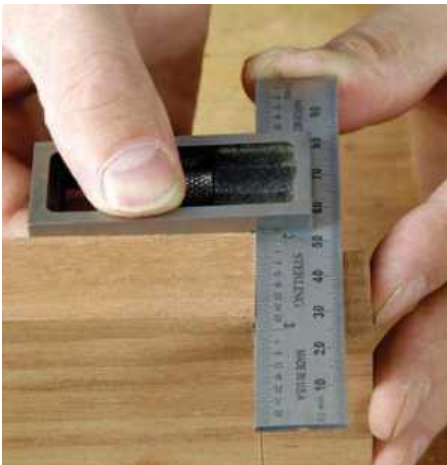
The dovetails used on this chest are a prominent feature and, as well as looking attractive, they are designed with strength in mind. Now although large tails and pins are relatively easy to mark out and cut, the thicker stock means that you have to pay attention to your saw cuts to establish and maintain square or perpendicular edges to every mating surface. Half a degree out at the front of the board becomes a millimetre at the back and the same from the top edge of the board to the baseline. There's plenty of scope to introduce unwanted gaps. To keep a watchful eye on this it will pay you to invest in a small square like this one made by Sterling Tools or Starrett. Buy one or borrow one if you can and I promise you won't want to give it back when you're through.



Mark and define all your joinery lines clearly and accurately



Protect the shoulders from saw drift by creating a trough for the saw to sit in



Check and dress each shoulder ...



... along every surface...



... however tiny

Upright and true



Keep your paring square and in line by using a reliable straight edge to guide the chisel. Cut at an angle away from the pins when working from the face of the board to avoid damaging them at the back side.



Tip the nose of the plough plane towards the ground at the far end of the board to establish the cut when cutting with the grain

Raised bottom

The first of the details on my version that you are unlikely to find on an original campaign chest is a raised bottom. These are typically grooved and rebated into the sides flush with the bottom edge of the chest sides and often with feet or bearers planted on the bottom. The need for some concealed castors on my chest meant that this wasn't an option although the means of construction is similar. I cut a 4mm groove around the edge of the

bottom board with a plough plane. The end grain is tricky but it can be done, just set your plane up so the groove is centred on the edge and work the corner nearest to you first to the depth required. Flip the board round and then work from the far end, where the groove is already established, backwards in a series of longer strokes. If you tackle the two end grain edges first you should eliminate any breakout.



The Nut Saver from Bernard Bilsberry is the perfect tool for fixing the fence on your plough plane so it won't budge



Point the nose of your plough plane skywards at the front of the board to establish the cut when cutting end grain

Pre-finish

There are two good reasons to polish an interior surface before assembly and both will save you time and result in a superior finish. 1. It's easier to do and won't leave you with an ugly build-up of product in the corners. 2. The polish, especially if it's followed up with a wax, will make cleaning up any excess glue a doddle. It also feels like there's one less thing to do at the end of the build.



Carry out as much of the finishing on the inside faces as you can before assembly

Double jointed

I'm sure there are ways and means to cut this type of joint with hand tools but in this instance I believe using a router was indeed the fastest method. The set-up time is minimal and running off the curved edge of the baseplate against a straight edge panel trimmed to size means you don't have to worry about fences. The reference edge is the top



Don't rule out power tools if they are appropriate

of the chest sides. The large tail area contains the corresponding rebate and 4mm groove for the tongue. When it came to assembly only the end grain edges were glued on all surfaces to allow the bottom to expand or contract as required within the confines of the box. Short grain tongues were used to maximise straight grain surface contact.



Overshoot the groove and clean out the round corners

Top down

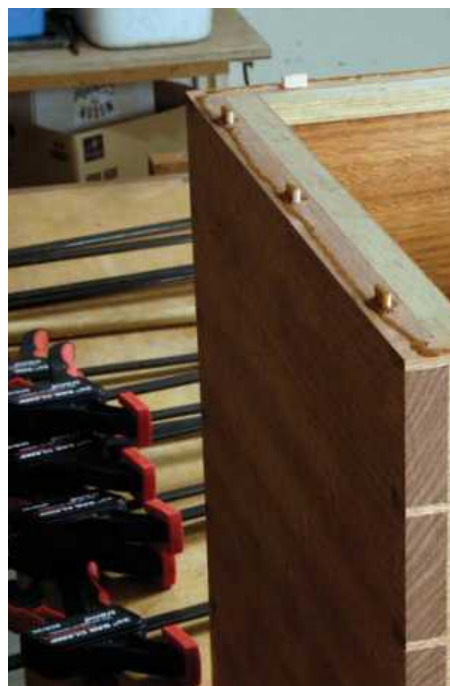
There are a few ways in which the tops on traditional campaign chests were finished; either with a floating panel held within a groove around the top of the box sides or by simply nailing it in place. I like the sheer clean lines of a top that's planted straight onto the box sides but not the idea of nails. A floating panel has some obvious advantages but ultimately leaves a detail around its perimeter. My solution was a mixture of both

and consisted of a framework of full-length buttons loose tongued into a groove around the inside of the box sides. It's another good opportunity to bring out the plough plane and if you make them from the same material as the bottom board the plane will already be set up and raring to go. Before fitting into place these were pre-drilled with slot holes in the appropriate direction to allow the top to move in one direction only and dry

fitted before gluing the top in place. Only the outer top edge of the box received a small amount of glue, more as a token gesture than anything else and to help with the polishing afterwards by filling any slight gaps. The back edge was left dry.



Cut slot holes in the buttons that will register with the sides and back edge of the top



Glue the front row of Dominos only and not the buttons

Floating top

One of the most useful features on a Domino machine is being able to machine over-length mortises. Combine this with corresponding rigid mortises and you can introduce a freedom of movement in a given plane to counter any expansion in your material. I used this method to attach the top to the box with a series of tight mortises cut along the sides and front edge only of the box base. The corresponding mortises were cut over length on the sides of the top and tight on the front effectively anchoring the

top at the front but allowing it to 'float' back and forth in a straight line parallel to the sides. Any discrepancy would be visible at the back of the chest and not the front. No Dominos were used along the back edge. Before carrying out this part of the assembly you'll need to smooth off the outside of the box and trim the top to fit the shape of the box. At this point you can forget about making everything perfectly square. That can come later if it's important to you.



Set your Domino to cut a tight mortise for those on the box



Mortise the front and sides only



Set your Domino to cut a wide mortise for those on the sides of the top



There's no jointing required along the back edge



Level off the box and trim the top to match its shape

A game of two halves

There's nothing wrong with making your box as a base with a separate lid if that's what your timber selection will allow and to some degree the equipment you have at your disposal will effect your decision to do so. In this instance you should decide to create two identical half pins at the break line that when planed, levelled or sanded will add up to a single whole pin the same size as those on the rest of the box. If on the other hand you are able to split a large box in two after it's glued up then you have two choices. One is to make a wider pin that will accommodate the kerf in the break, the other is to make an adjustment to the spacing on the pins and create a wider tail. I chose the latter and here's why. Generally speaking, the closer things are together and the more there are of them the easier it is to pick up on any variance in size and spacing. Pins especially

are a focal point for anyone with an eye for detail, not just woodworkers. I allowed myself a window of 8mm in which to make my cut. It's generous but safe and gives you a chance to correct things if the separation doesn't go to plan.

How you go about it is up to you. You could tackle it with a sharp hand saw or rig something up to do it with a router but if you have access to a circular saw and guide track the two are made for this type of job. The kerf is likely to be in the region of 4mm and if your track edge is good and fresh you should be able to run them all the way round and meet up without too much trouble. I was out on one corner just less than 1mm but with 2mm to play with each side it wasn't a problem. The trick is not to cut all the way through the box in a single pass. This will help to

preserve the interior faces and hold the box together so you can creep up to a separation gently with a carcass or large rip cut tenon saw.

When you've completed the job put the screws in place through the slotted holes in the buttons to finally fix the top in place.



Just one way of separating the lid from the base

Shoot to fit

Shooting the edges is easy if you scribe a line from a reliable straight edge. Start with the base part and don't struggle to get them an exact distance from the bottom. Maths won't help you here, just focus on straight lines as if you were levelling a board or bench top. When the base section is flat all the way round lay the lid on top and note

any high spots. The box base is now your reference so shoot the lid to fit that and nothing else. It's nowhere near as difficult as some people make out as long as you have a scary sharp iron in your plane and your wits about you. Use a block plane if you have one to work on small areas and avoid planing the top edge out of square.



Another use for that reliable straight edge

Dual-purpose dust seal

Any chest or trunk should be designed to protect its contents and the addition of a dust seal to the lid will do precisely that and more if you get it right. The lid on my chest has quite a deep cavity to it and therefore could be used to store things or to display a decorative panel. I was able to incorporate both and a dust seal by constructing a slightly raised frame that will, in time, receive a burr elm veneered panel. Putting a chamfer on the leading edge of the dust seal frame helps to dampen the closing of the lid and locate it with the base. When the time comes to fit the mortise lock it will also help with alignment of the keep.



Position it inside the lid to create a lip



Add a little edge bead detail to the dust seal



Put a slight chamfer on the leading edge

Finishing touches

Traditionally, campaign furniture would be decked out with brass straps and corner caps to protect the exterior and offer a little more in the way of structural integrity. It may be historically correct but unless these qualities are called for it seems like an unnecessary embellishment to me. After all it hardly constitutes hand luggage. Coincidentally the recipients of this chest

aren't big on bling either so that detail was left off. However, there is a detail that is perhaps a little out of fashion these days and that's the humble round over. If you have a small hollow or round – whichever way you swing – reach for it now and get to work. It's the easiest of the moulding planes to master and far more user friendly to use than a router. Tackle the end grain edges first from both ends and then the straight grain ones. If your moulder's profile isn't an exact arc work the profile from both faces and you will eventually iron out any imperfections.

You'll find that most brassware requires a little work before it can be fitted to your chest. The first thing I do is re-countersink the holes to suit my brass screws. Then run

through the grits from 180 to 320 with some abrasive paper on all the visible surfaces to remove all the machine marks, this will smarten them up no end if you haven't got a buffing wheel attachment for your grinder, or a grinder come to think of it. Finishing with a little dab of metal polish helps to soften the scratch lines.

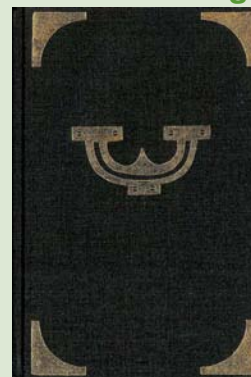


Re-drill the holes carefully



Break out the moulding planes to put an authentic round-over along all the edges

Further reading



Campaign Furniture by Chris Schwarz

Published by Lost Art Press

Available from

Classic Hand Tools www.classichandtools.com

£26.50

Clocked

My tip for clocking screws is to set all my hardware in place with metric pozi screws first time round. I find that the thread and head size that works best tends to be smaller than the brass screws that will finally take their place.



Aim to fit the brass screws just the once

Traditional steel slotted screws are expensive if you can find them. Choose a size that matches or is smaller than the pilot hole required for the brass screw and shorter in length. When the time comes to fit everything up for the last time re-drill the holes carefully and put the first screw in place noticing its position as the thread starts to bite. Wind it in and if you can end up with a clocked screw start all the others from the same position. If not, then back the screw out and turn it slightly in the direction you need to reset the alignment and drive it home again. Having the slots all standing at attention (north south) is just as neat as having them in line (east west). It still shows you cared. A little wax on the thread always helps.

Conclusion

There's a lot I haven't covered in this article about the making of this chest and about campaign furniture in general but if you'd like to read more on the subject Chris Schwarz's book *Campaign Furniture* is a great place to start. I set out to use the qualities that capture the style and ethos of this type of furniture – portability, robustness and utility – to see how they would influence my work.

They did and I enjoyed the ride, a lot. I'll cover the rest of the build in a few separate tech articles and via the blog – complete with out-takes – if you want to chart its progress and when it's finished I think I'll be happy that I haven't just created another piece of vernacular furniture like those cheap reproductions that were so popular in the eighties. That's the 1980s by the way. *F&C*



Plain and simple on the outside. A 21st-century campaign chest for stay-at-home campaigners



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Stroke for stroke

Is your dovetail saw serving you well? Derek Jones sizes up the new Stiletto from Bad Axe to find out if the numbers really do stack up

When I first heard about the 305mm Stiletto from Bad Axe, I've got to admit I was a little sceptical. Was it my default raise-one-eyebrow response to new versions of the wheel being invented holding me back? Or could it be that I was just satisfied with my existing dovetail saw to pay it too much attention? Whatever the reasons, they've served me well over the years and are a rational baseline from which to assess a new approach to an existing technique. Bad Axe has a reputation for producing great no-nonsense saws for a wide range of applications. A blend of historical accuracy, namely traditional folded backs and relentless attention to detail, separates them from a lot of other premium saws. For the most part, these details will be lost to the average user as the benefits of a folded back have largely been lost over time. What, at first, appears to be a clumsy solution for holding the saw plate in tension is in fact a stroke of genius – 18th-century genius to be precise.

Quick release

Consider for a minute the amount of rough and tumble your saw is likely to endure over its lifetime, then ask yourself if it will be as capable this time next year as it was the day you bought it. For anything other than a folded back saw the rough and tumble could prove fatal and here's a useful analogy to make it clear why.

What do downhill ski bindings and a traditional folded sawback have in common? In the event of any potentially

fatal rough and tumble, they're both designed to release before any real damage occurs. In the case of the skier he will retrieve his skis, dust himself off and all being well, live to ski another day. Similarly, the folded sawback woodworker can turn to his dead blow mallet and reset his sawplate to carry on as if nothing happened – see F&C 234. Those sporting a fixed binding, ski or saw for that matter, might not fare so well.



Mark Harrell, from Bad Axe saws, applying a traditional folded sawback with the aid of a dead blow mallet

There's been an awful lot written about sawing technique; how to stand, where to stand, what to look at and what to hold on to, but nothing to my knowledge about the probability of drift in relation to stroke rate or length. Think about it, if it takes 30 strokes to complete a full-depth cut to the baseline, that's 30 changes in direction and 30 opportunities where drift can be induced. Cut the number of strokes and it stands to reason that the probability of inducing errors is reduced.

Now we can either do this by choosing a saw with more aggressive tooth geometry – fewer tpi – or by simply applying extra downward force. Neither of which is ideal and here's why. The former will result in a wider, less attractive kerf and the latter force the saw to go where it's not wanted. The Bad Axe solution to this is to increase the length of the plate and therefore the length of the stroke and use the increased mass of the saw to do more of the hard work.

With a typical dovetail saw measuring 250mm long it's likely that you will only ever use around 200mm of sawplate while cutting, for fear of jumping out of the kerf and risk marring the face of your work. While one side of your brain is focused on watching the line, the other side is working behind the scenes to avoid said catastrophe. The thinking behind the Stiletto then, is to eliminate the background activity and allow you to get on with the business of tracking a straight line and only a straight line. Simple. So there's the science, but how does it work in reality?

In practice

My favourite dovetail saw – the attachment is sentimental rather than practical – is a 200mm 15tpi Buck from about 1920. My workhorse dovetail saw on the other hand is a brand-new 250mm long 15 tpi and I use it most because it tracks a straight line without any effort.

Swapping to the 305mm plate with the same tpi and utilising its benefits took a bit of getting used to but there were some definite pros. If you're in the habit of using a variety of different saws regularly I wouldn't call them groundbreaking, because your muscle memory won't be quite so entrenched, but if your selection is limited, it could prove to be the perfect antidote to drift. As I've mentioned, those extra inches add up to an increase in weight meaning the saw does more of the hard work and this certainly helps on thicker stock, especially hardwood.

Conclusion

The benefits of using the Stiletto are most definitely appreciated on large scale work,



Left to right. Buck 200mm, Bad Axe 255mm and 305mm dovetail saws



The new Stiletto from Bad Axe

Details

Contact: Classic Hand Tools

Price: £157.89

Web: www.classichandtools.com

Stroke for stroke

Saw	Tpi	Weight	Number of strokes
Buck 200mm sawplate	15	268g	40
Bad Axe 255mm sawplate	15	381g	25
Bad Axe 305mm sawplate	15	438g	21

Cuts were made into the same material – 24mm thick mahogany (Khaya ivorensis) with each saw to complete an identical run of six tails and seven pins. The number of strokes represents an average per pin or tail. For continuity the material was taken from a single board.

around 18mm stock and above – take this to include gang cutting as well, which could take you close up to 50mm. On batch work you will immediately notice an increase in productivity; look at the table above. On thin stock, especially softwood, you might find the pace a little too much.

As far as accuracy goes, I'd agree with their claims, but I suspect there are other important factors to be considered, such as set and plate thickness and consistent toothline geometry. That's another matter entirely, however, and we'll cover that another time. *F&C*

Hologram joint

Daniel Graham adopts a novel approach to solve a common woodworking problem

Recently, I tried to come up with a new solution to a common woodworking problem. What to do when you have to run end grain into side grain and you're not excited about dowels, pocket screws, biscuits or the like? I find that most of the time intersections like this are a missed opportunity for a design solution. I came across this situation in making my first slant top desk. The support rails for the lid of a slant top desk usually join end grain to side grain. This joint is obviously never a dovetail since the side grain in the front piece would be a weak spot and most likely fail. I thought there had to be a way to keep the aesthetic choice of the dovetail without compromising the structural integrity. Some people would not regard this as much of a problem and I know it can be resolved in a host of ways including veneer. However, I was going to try something new that could solve both the structural and design problem. I came up with a joint consisting of a herringbone inlaid dovetail on the side faces in addition to tails on top and bottom. It was fun to make and I think it looks great. Here, I've laid out the necessary steps if you would like to give it a go, as well as some handy tips to help along the way.

Preparation

For this example I am using a 90mm wide 4x4 board of American cherry (*Prunus serotina*) joining into the side grain of black walnut (*Juglans nigra*). The ratio of the herringbone dovetail is 1:5. The top and bottom tails are drawn to proportionally fit the space on the edge of the board. I do all the layout using a fine pencil (do not use a marking gauge or knife; in further steps we will be bending and this would cause a weak point for breakage). I then cut the herringbone tails and the thickness for the top and bottom tails.

I figured out through trial and error that it is better to rout out the middle at this point. I've tried it at the beginning of the process, but this made it harder to cut the tails, while routing the middle after removing the waste from between the tails involves more work to remove the waste.

Taking it in multiple passes removes all the material to slightly below your tail line. I go slightly below the line to make aligning and adjusting the mating surface easier. If you rout to the line only it has to be exact. If there is anything less than a flush surface this will pull all the tails down and cause a gap at the top of the socket.

As in a standard set of tails, cut out your waste. Then create a small sacrificial block that can fit in the middle cavity. This allows for grain support when cleaning up the base of the tails and prevents blowout. Make sure to slightly bevel the tails back to the bottom so they will bend more easily.

At this point I transfer my tails to my socket board. You can use any method you like. You could start from a template that you would trace to all parts and cut to the line, but if for any reason you stray, you would have to adjust your template appropriately. For me, what works best is to trace the tails and then transfer the marks with a knife to the socket board. In this way I get the exact tails I have cut, much like in traditional dovetail transfer.

Bevel the sides and tops of each tail – the water you are about to use will swell the wood and these bevels will allow it to compress into your sockets. After the wood has found moisture equilibrium again you will not have gaps because it has room to shrink. If you were to cut an exact fit of the wet tails into dry sockets you would end up with gaps in the seams.

Set aside your tail board for now and get to work on routing out and cleaning up all of the sockets on your long grain socket board. This can be tricky so take your time to avoid breaking the delicate parts.

The wood fibres need to be softened to bend. Keep the soaking heat focused on the tails in order to keep the wood in as much of its original dimension as possible. Rather than steaming or soaking more of the board than necessary I put just the tails in a bowl of boiling water and let it soak for about 30 minutes. Then reboil the water and repeat the process. Although it is tempting to use a pot on the stove I use a bowl of water to prevent the steam from affecting the rest of the board.



Lay out in fine pencil rather than scoring with a knife



I clamp my tail board to where my angled lines are vertical so I can make more consistent cuts each time



All lines cut, including the top and bottom tail walls. It looks wrong but trust me



Rout out the waste from the middle of the board, stopping right below the tail line



Cut the top and bottom tails with a fret saw. Use some packing material if you need to



Cleaning up the tails with a support block placed beneath within the void



The sides and tops of the tails all have bevels on the inside edges

Assembly

Once the tails are flexible I put the board in a vice and quickly begin flexing the tails out and getting the socket board in place (if you had used a marking gauge or knife instead of a pencil, this is the point where the tails would break rather than bend). I find it best to work in alternating sides, bending the tails on one side and then the other, while moving the socket board further in. I use the length of a bench chisel to pry out the tails. As fast as they pry out they will want to go

back in, so I use the same chisel to pull them out from the top when needed. With all the bevels cut, there will be a point where the tails are sliding on top of the socket board and it will begin to fit into place. I lightly tap the socket board with a mallet to get it all the way to the bottom. If you have done everything correctly, the board will tap in easily and the tails will find release from their bending by falling into the sockets. Tap the tails into place with a cork or leather-faced

mallet, being careful not to damage the thin wood pieces as they are wet and will dent easy. Although it may be instinctive to put it in a vice and compress the tails into place, this doesn't work as well. The wood swells at the base and it runs the risk of crushing the tails. You may find yourself trimming excessive swelling to get the right fit, so have a sharp chisel handy. Let the boards dry out and simply clean up with a few passes of a plane. Your joinery work is finished. *F&C*



Tracing paper for transferring tails. I use the two side pieces of tape as a way of registering the position of the tails



The finished socket board with shallow pins



Gently prising out the top and bottom tails while the wood is still pliable



After a few clean-up passes with a hand plane the joint is finished

Tongue-and-groove shoot-out

Aaron Moore compares using a dedicated hand plane to a router bit set-up to produce perfect tongue-and-groove panels



PHOTOGRAPHS BY AARON MOORE

When I build a piece of furniture it's custom made and one of a kind. Like many others in this situation, hand tools have become my best friend in the shop as I don't need to waste valuable time setting up a power tool simply to make a few cuts. But I've taken no oath against using power tools and I do use them when appropriate, so when I decided to make a small chest of drawers with a tongue-and-groove back panel I had a decision to make... buy a dedicated tongue-and-groove plane or dedicated bit set for the router. I tried to guess at how long it would really take to plane each half of the joint by hand compared to the time lost by setting up a matched bit set while also thinking about the fit of the joint and quality of the visible shoulder left by each tool, but I couldn't come to any conclusions without putting each tool to work. Fast forward to a

few clicks later on the internet, I'd ordered both and they were delivered to my door in a few days. Time for a shoot-out.

The contenders

To keep things fair, I purchased brand-new, premium tools; a Lie-Nielsen No.49 plane, which retails for \$195 and a Whiteside No.3373 bit set, which retails for around \$110. If you're on more of a budget, vintage Stanley T&G planes run \$40–65 online and cheaper bit sets can also be purchased for around \$60–80. I tested each tool by cutting 12mm thick boards made from maple (*Acer spp.*), cherry (*Prunus serotina*), poplar (*Populus spp.*) and pine (*Pinus spp.*) then evaluated them on the fit of the joint, the surface quality left by the cut and the time it took to complete the entire job.



The edges were planed straight and square relative to the board's reference face

Getting started

Before jumping into using either the plane or the bit set, the wood has to be prepared. Mill the boards at 12mm thick – the thickness I prefer for most back panels – and plane the edges perfectly straight and square relative to the board's reference face. Make sure the fence of the plane or the top of the router table touches the reference face on both the tongue board and groove board so the joint aligns properly.

The router bit

Beginning with the matched router bit set, note that these are large bits and should be used on a router table for safety purposes. Start by installing the tongue bit – though the groove bit can be installed first if you prefer – and raise the cutter to roughly centre it on the stock. Don't worry about centring the tongue precisely, the corresponding groove will be aligned to match and cancel out any offset. Set the

router table's fence flush with the bearing on the bit, fire up the router and run your board(s) through with the reference face down so it's touching the table.

Next, swap out the tongue bit for the groove bit and set the height so the cutter matches one of the tongues you just made. Note that the tongue board should be placed with its reference face down so the groove cutter is set to the proper height. Again, align

the fence so it's flush with the bearing then make a test cut on a piece of scrap. Check the fit and how the reference faces align. If the cutter's height is off by a hair, adjust and test again. This should only take one or possibly two attempts at most. Cut all the necessary grooves in your boards and you're done.



The tongue bit removes waste from both sides of the joint in a single pass



The groove bit can be setup initially by eye from the edge of the tongue profile



After all the grooves are cut, the boards are ready to assemble

The hand plane

When using a tongue-and-groove plane there is little setup; simply clamp the board in a vice and start cutting the joint. If the depth of the cut is too light, tap the back of the blade with a light hammer to increase it. Note that this tool is designed for taking heavy shavings, which will help complete the joint as rapidly as possible, so take the thickest shaving you're comfortable with. There is also no lateral blade adjustment to deal with which is nice, just make sure the blade is always sharpened straight across or the shoulders on the tongue board will not align squarely. Finally, set the fence to cut the tongue or groove by raising the pin in

the front and spinning the fence 180°. This rotation shifts the fence to expose either one cutter for making the groove or both cutters with a gap between them for making the tongue. For consistency's sake, let's address the tongue first.

Begin the joint by placing the tool towards the end of the cut, roughly 75-100mm from the end of the board. Press the fence firmly against the reference face with your left hand then push the tool forward with your right. It helps to place your hand over the fence, not the knob of the tool. After this short initial cut is complete, back the tool up another 10mm and repeat the process until you've

got the tongue started along the full length of the board. This method of cutting the tongue, which will also be used for the groove, prevents the tool from veering off course in the early stages of the cut. Now full-length cuts can begin as the tool is trapped by the existing tongue and can no longer stray off line. Continue cutting until the tool has bottomed out over the entire length of the cut.

When cutting the groove, the only setup is to rotate the fence 180° as previously mentioned. Repeat the same process that was used to cut the tongue, holding the fence against the reference face of the board and cutting until the tool no longer takes a shaving.



A light tap to the back of the blade will increase the depth of cut



Raise the pin...



... and rotate the fence 180°



Press the fence firmly against the reference face with one hand and push forward with your other hand

How they compare

When comparing the two methods for cutting a tongue-and-groove joint, I found both did a fantastic job, but that doesn't make them equal in all situations. The router bits handled all four types of wood with relative ease regardless of grain direction and left an excellent finish on the shoulders of the joint that will be visible when the parts are assembled. The fit was essentially ideal, a slip-fit that would easily allow for wood movement in a floating panel scenario, but it wasn't sloppy. And while the size of the tongue-and-groove cannot be adjusted in this set – I avoid the sets that do as they waste time and are prone to error – they will handle stock from 12mm thick up to 32mm thick producing a tongue-and-groove that measures 6mm thick x 8mm long.

So what are the negatives to the router-produced joint? Basically only the unavoidable. First you need to own not only a router, but also a router table and hopefully one with a fence and dust collection. Second, there are the standard safety considerations concerning your ears, eyes, lungs and fingers. And finally, there's the setup time involved with using router bits; installing the bits, hooking up the router table and dust collection, maybe clearing off the table if you've stored other tools or projects on it. For me, a little over 10 minutes was lost in time spent setting up the tool rather than working wood. The good news is once you're up and running you can handle a common 1.2m long board about every 30 seconds, which includes the time it takes to pick up the board, cut the joint and set it aside. So if you have dozens or even hundreds of linear metres of wood to tongue and groove, the bits are a no-brainer. For smaller jobs, however, the hand plane is still

king. Compared to the router bits the joint off the hand plane fit a little more tightly, but not by much. It was still an excellent fit and it could be assembled with hand pressure. The shoulders were clean for the most part, though thick shavings combined with grain reversal or knots can lead to some tearing. More on preventing this later. Last but not least, is the time it takes to finish a job. Unlike the router bits, which basically cut any material at a consistent rate, the time to complete the joint by hand will primarily depend on how heavy a cut you can take, which depends on the material you're working with. Expect to take at least twice

as long on a hardwood like maple compared to something soft like pine. On average I needed a little over one minute per 300mm to complete both the tongue and groove. So a 1.2m long pair of boards would take around four or five minutes to complete. If efficiency is your only concern the hand plane will likely win out when cutting 3-4.5m of tongue-and-groove joinery, depending on the type of material you're working with. That may not sound like a lot, but think about how many metres of tongue-and-groove joinery you'd actually need to cut for a standard project and the hand plane starts to make sense for a lot of people building custom furniture.



The finished joint

Final considerations

Regardless of what has been discussed here, most of you probably already know which way you'd lean. Those accustomed to power tools can and should buy the bit set and those already comfortable using and maintaining hand tools won't need much convincing to add a new one to their collection. So I'll close with some final tips and perks of each tool that may not be immediately obvious.

As mentioned above, I used the No.49 hand plane which cuts 12mm stock, it will not cut thicker. If you prefer working 20mm material you should purchase the No.48 model. If you work with both sizes you'll need to buy both models. One hidden benefit of the tongue-and-groove plane is using it as a plough plane. Although not nearly as versatile as a true plough, it will create a groove of a fixed width and depth a fixed distance from the edge. This is ideal for grooving the sides of a drawer or box to receive the bottom panel. And if you're struggling with tear-out at the shoulder of the tongue joint, it is likely being caused by planing against the grain and/or taking too thick of a shaving. One option is to try to

“Regardless of which option you prefer, I would highly recommend adding a dedicated tool for producing this joint to your shop. It's the best way to get professional, repeatable results in a reasonable amount of time”

orient your boards so you're always planing with the grain for the tongue and don't worry about the groove as that will be hidden. If this isn't possible, reduce the size of your shavings as the joint nears completion. It will take a little longer, but removing less material with each cut will greatly improve the appearance of the shoulders on a problematic board.

As for the router bits, you may appreciate their ability to cut tongue-and-groove joints across end-grain for something like a door frame. The exit of the cut should be supported

with scrapwood to avoid blowing out the fibres, but the bits will deliver good results.

Regardless of which option you prefer, I would highly recommend adding a dedicated tool for producing this joint to your shop. It's the best way to get professional, repeatable results in a reasonable amount of time. *F&C*

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PHOTOGRAPHS COURTESY OF ANNE BRIGGS-BOHNETT

Our correspondent... WIA 2015

Whichever side of the pond you were this summer, there was a great woodworking show to attend. Anne Briggs-Bohnett was our ears and eyes for this year's WIA2015

Woodworking in America 2014 was the first woodworking conference I'd ever been to and what an introduction into the world of woodworking shows it was! Follow-up from WIA14 created a whirlwind of opportunity for me in the woodworking world, attending then as a hobbyist woodworker and blogger. Going into WIA15, I was a full-time woodworker, managing a wood studio at an Arts Center in Seattle, writing for *F&C* magazine, working handtool events for Lie-Nielsen and building furniture on commission whenever time allowed. I had a bit better idea what to expect at WIA 2015 and it certainly didn't disappoint.



Fellow farmer/woodworkers Don Williams and Anne Briggs Bohnett

F&C has acquired readers from all four points on the compass over the years and since going digital in 2013, that trend has increased. You can find us anywhere in the world with a link to the web. As the content of the magazine

is a true reflection of our readership, we've decided to bring you articles that will take you on a workshop tour of the globe. If you have a technique or story that you'd like to share with the wider woodworking community then drop us a line.

Our reporter this month is regular contributor to *F&C*, Anne Briggs-Bohnett from Seattle. After considering the distances it might almost have been better to have made the trip ourselves. Next year maybe...

The marketplace

Friday and Saturday were abuzz with activity as shoppers filled the marketplace to try out new tools and get to know their makers. Onlookers watched as gossamer shavings were being made in the Blum Tool Co. booth, as Jonathan from Heritage Wood School cut houndstooth dovetails, and as woodworkers competed in the Handtool Olympics with the gents from Mike Siemsen's School of Woodworking. Of course, Lee Valley, Veritas and Lie-Nielsen Toolworks were there, along with a few other 'big name' tool makers, but I was pleasantly surprised to see so many small companies in attendance this year. Blue Spruce Toolworks, Glen Drake Toolworks, Blackbear Forge, Vogt Toolworks and many others were there, selling their wares and teaching about their products.

Much like at WIA 2014, several prominent hand tool-focused tool makers – who met on the social media website Instagram – joined forces to rent out a large booth space together to bring quality, small scale tools and woodworking products to WIA2015. Jason and Sarah Thigpen of Texas Heritage Woodworks had their youngest son, Turner Guthrie in tow the whole show. Their whole business, like so many others in this industry, is entirely a family affair and Turner's



Turner Guthrie was a major hit at WIA15



Stan with Heritage Wood School

presence was a delightful reminder of that fact to everyone present. Other 'one man shops' present in the 'Instagram booth' were



Making Shavings with Meeks Planes

Scott Meeks, planemaker; Jeff Hamilton, gauge maker; Chris Kuehn, Sterling Toolworks; and Mark Hicks, Plate 11.

Woodworking in a digital age

By far the most steadily populated booth in the marketplace at Woodworking in America this year was that of the 'Video Woodworkers', a group of Youtube.com woodworking sensations that shared a double booth space at the conference. Between a steady stream of great giveaways and a whole lot of autograph signings, there always seemed to be quite a crowd gathered round. These do-it-yourselfers have created an entire industry that has generated a huge following, with some of their videos in the multiple millions of online views. It was a fascinating sight to behold, a strange, yet wonderful juxtaposition of technology and an age-old craft. These video woodworkers are empowering thousands of young woodworkers with the knowledge they need to complete the projects they want for free.



New woodworking celebrities in town

The Classes

Popular Woodworking went all out putting forth a woodworking 'celebrity' lineup when it came to class offerings this year; Christopher Schwarz, Roy Underhill, Patrick Edwards, Tom Fidgen and Vic Tesolin just to name a few. My favourite class this year, though, was the spoon carving class taught by Jarrod Stone Dahl. His passion for his craft, preserving and recreating traditional designs and his emphasis on the importance of practice were especially infectious. Though I've carved a few spoons myself, I took away a lot of new information, a new confidence and a newfound excitement for spoon carving.



Deneb teaches sharpening techniques



Jarrod teaches spoon carving

DESIGN & INSPIRATION

Our correspondent

New tools

Probably the biggest tiny hit at WIA15 was Marco Terenzi's revelation of his newest mini-creation, his perfectly-to-scale 1/4 size Lie-Nielsen No.62 Bevel Up Jack plane. Onlookers were amazed at the incredible accuracy of the tiny copy, and people 'oohed' and 'ahhed' plenty each time he showed the moveable mouth mechanism actually opening and closing the tiny plane mouth. I know I am only one on a very long list incredibly anxious to see his fully outfitted 1/4 scale Anarchist's Tool Chest full of tiny, fully functioning tools.

Tico Vogt brought his new drill press jig that, much like his shooting boards, is a stroke of genius. Rick Blaiklock with Lee Valley was very excited to show me one of his 'babies' Lee Valley has been working hard to put into production, a jig to turn any Dremel tool into a plunge router and special new bits that could potentially be revolutionary for instrument makers and inlay fanatics. I was also quite impressed by Lee Valley's new Work Surfaces, which lend an extra hand in clamping power in creative places.

Patrick Edwards has been working with Mark Hicks at Plate 11 to create a new Chevalet kit, the prototype of which Mark brought to WIA. Of course it was very exciting to listen to a master craftsman talk about the tool he was developing, but when Marco Terenzi, mini genius sat down at the chevalet, a crowd began to gather.



Tiny Jack Plane



Marco's 1/4 scale Jack



Will Marco make a benchtop version?



New roads for inlay



New roads for inlay

Handtool Olympics

Many conference attendees made sawdust and shared a few laughs at Mike Siemsen's Handtool Olympics booth. Competitors were tasked with ripping a board, jointing the edge of that board, and creating two forms of joinery – a dovetail joint and a mortise and tenon joint, all with a minimal toolkit, a ticking clock and a rigorous judging system testing for speed, strength of joinery and appearance. For each mistake that was made, time was added to the final score. The competition was great fun, the instructors from Mike's school had plenty of wonderful advice to give and the door prizes donated by other vendors were quite enviable. Suffice it to say though, I didn't leave with any of them after my time ran out in the ripping process and my seven minute dovetails were passable at best.



Chris Vesper's Olympic Dovetails

And the food!

I don't think any story on an event happening in Kansas City, Missouri could possibly be complete without a mention of Arthur Bryant's BBQ. By chance, fate, or whatever you want to call it, Arthur Bryant's seemed to be the unofficial meeting place for all attendees of WIA15. Sawdust makers enjoyed all kinds of sauce dripping, mouthwatering bbq'ed meats and ice cold beers together on multiple occasions throughout the weekend in this famous Kansas City hangout. It has been rumoured that Chris Schwarz himself has had a photo on his phone for several years now of the first sandwich he ate there. And having enjoyed several meals there myself over the weekend, I can understand why.



BBQ and woodworking go hand-in-hand

WIA15 wrap-up

The people, the community around the woodworking craft, have always been the most important part for me. While woodworking shows involve travel, long days, lots of work and standing on hard floors for long hours, they are so energising. With so many talented people gathered, ideas and inspiration abound. Old friends meet kind embraces and new friendships are formed. These conferences are a fantastic way for woodworkers to re-fuel. They are an opportunity to try tools out, learn how to use them, make new friends who share their woodworking passion and take a few classes



Jason Thigpen, Vic Tesolin and Tom Fidgen have a chat

to get inspired and learn practical lessons to put into practice in their shops at home. *F&C*



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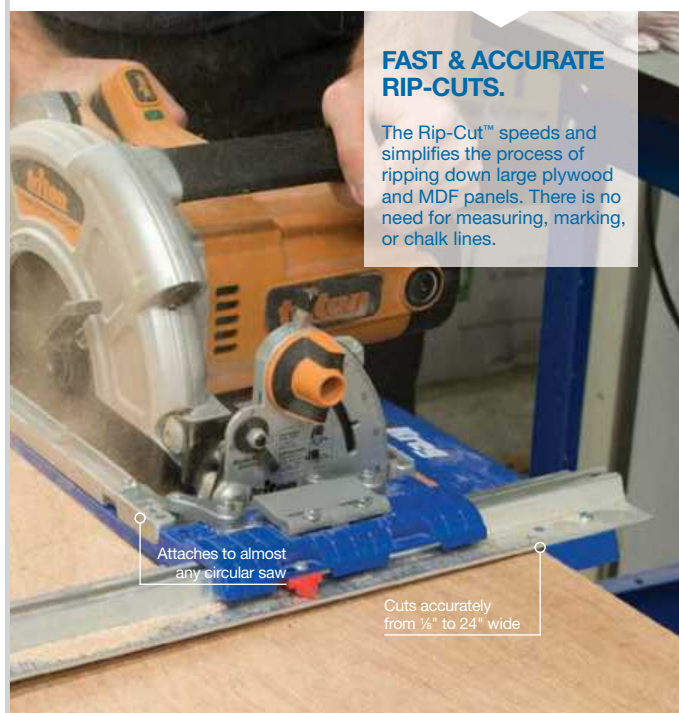
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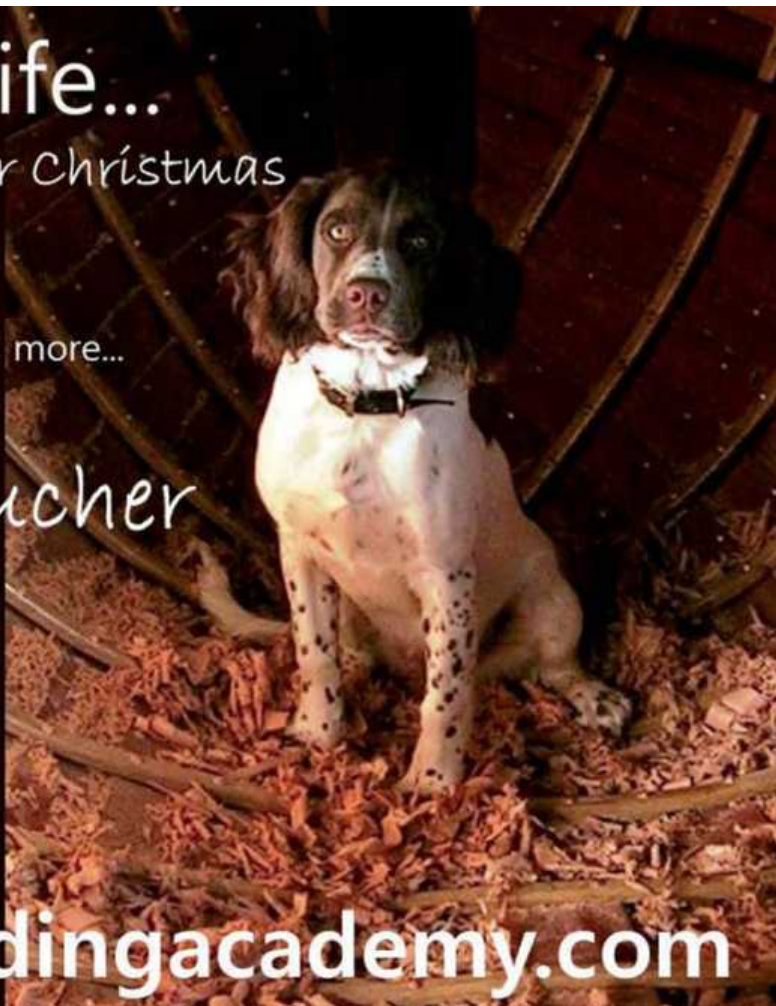
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Time to fill the grain

Kieran Binnie puts new water-based grain filler Aqua Coat through its paces

Grain filling is an essential, if not particularly glamorous, stage of finishing many projects. There are a number of grain filler products available, in addition to the more traditional solutions like plaster of Paris. I recently tested a new product to the market, Aqua Coat.

Tough assessment

Aqua Coat is a water-based transparent grain filler stocked by Tonetech Luthier Suppliers – www.tonetechluthiersupplies.co.uk. The manufacturer's instructions state that the filler can be applied either with a cloth or be squeegeed into grain and that it can be stained before use. Up to two coats may be needed to completely fill the grain, however the filler dries quickly enough to be sanded and refilled, or finished, one hour after application.

Tonetech also provided a sanding sealer from the same product range as well as a water-based lacquer with which to test the grain filler. Water-based lacquer is my normal finish of choice for acoustic guitars (although this is the first time I have tried Tonetech's lacquer), so I decided the best way to assess the product was to compare its performance



Preparing the oak test boards in readiness for the test

– and that of the sanding sealer – against my usual brand filler and sealer. I planed up three oak (*Quercus robur*) test boards, each measuring 300 x 100mm, with my No.3 smoothing plane and treated one side of each board with the Tonetech sanding sealer. The reverse side was given a wash coat of garnet shellac – my usual sealer of

choice. The Aqua Coat filler was then applied to both sides of the first board, while I used my usual thixotropic filler on both sides of the second one. The third board went straight from sealer coat to lacquer without any grain filler to see how the lacquer fared on ring porous timber without the benefit of grain filler.

► Using the grain filler

Out of the pot the Aqua Coat filler has the appearance and consistency of a very soft paste, similar to a softbeeswax/turpentine blend. It applies easily with a cloth by wiping in small circles across the grain. It's also simple to track how much of a panel you have treated because the filler leaves behind a wet-look sheen. One of the tricks with applying any finishing product is to know how much of the substance to use in each application. Generally, it's better to apply too little rather than too much and risk flooding the work. I had obviously been a little too cautious when filling the first panel as most of the grain remained open. Two subsequent applications filled the grain, so clearly a generous application is required.

As a word of caution, if you apply a large volume of the filler it's possible that some runs can develop. These dry and remain on the surface as lumps that require further sanding before applying any subsequent finish. With careful application and some practice, however, applying the optimum amount of finish should not be a problem.

The filler adhered well to both the Tonetech sanding sealer and the shellac sealing coat. Open wood grain is generally darker than the rest of the wood, which creates a sense of depth. Therefore as a rule, grain filler needs to be either truly transparent or darker than the rest of the wood, so as to retain the depth of colour in filled wood. Unlike my usual product, which fills grain with a silvery deposit, the dried Aqua Coat was genuinely transparent in the open grain. Consequently there was no need to stain the Aqua Coat to retain the darker open grain of the oak.

Once dried, the filler imparts a glossy sheen that both warms the colour of the wood and increases the contrast of any figure. Whether that finish is appropriate for the project in question should be considered before you use this particular brand of filler. It is possible to reduce the gloss with gentle sanding, but this must be done with care in order not to cut through to bare wood. It also adds a further step to any finishing schedule. The warmth and increased contrast in the wood is more difficult to remove. However, these characteristics are not flaws in the product. In fact, they could even be used to good effect where a high-gloss finish and 'popping' grain figure are desired, but they must be taken into account when selecting finishing options.

In contrast, my usual blend of filler is a thicker, oily paste that looks more like a traditional wood filler and must be applied with a squeegee (I use an old bank card). The grain on the oak test board was filled from one application and left a thin white residue on the surface of the work that was easily removed with 320 grit paper without any risk of sanding the wood below. This filler did not add any sheen or colour to the oak which meant that the lacquered panel retained the original colour of the wood, shaded only by the garnet shellac. This is no better or worse than the Aqua Coat filler, but



Aqua Coat is easily applied with a cloth, simply rubbing in small circles across the grain

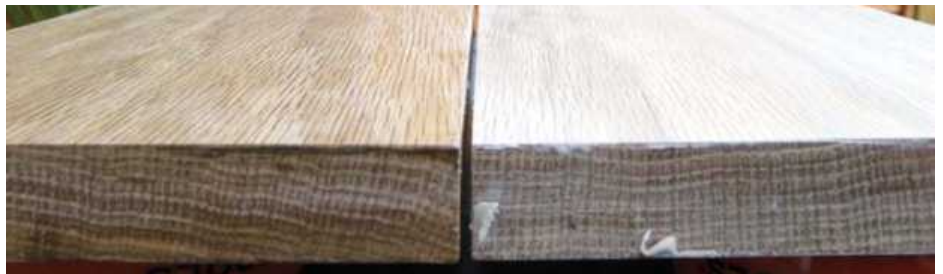
demonstrates clearly how different products will have a significant effect on the final finish of a product.

The test was completed by two brushed coats of the Tonetech lacquer. This dried quickly and adhered well to the Aqua Coat

filler and my usual brand. As expected, the lacquer coverage to the panel without grain filler was inconsistent, with obvious dimples where finish had wicked into the open pores.

Conclusion

The Aqua Coat filler was easy to apply and ultimately filled grain well despite needing several more coats than my usual filler. For projects that benefit from a high-gloss finish and increased contrast in figure, I would be happy to use this product again. It would not be my first choice for projects needing a more natural finish, however, or where I wanted the colour temperature of the timber to remain uninfluenced by the finishing products. As I mentioned earlier, this is not a criticism of the product; it could, in fact, be highly useful for specific projects. Simply, this goes to highlight that all finishing products have specific characteristics that must be taken into account when deciding how to finish a project. Indeed, matching such products to a project is as important as matching timber and hardware.



When the weather is good nothing beats finishing in the open air. Here you can clearly see how the panel filled with Aqua Coat (left) has a darker finish and greater contrast than the panel filled with my usual brand of filler. This is before any lacquer has been applied



After two coats of lacquer, the effect of the different grain fillers remains very noticeable. The Aqua Coat (left) still has a higher level of gloss and a warmer colour than my usual filler

Why grain fill?

The use of grain filler can be confusing for woodworkers unaccustomed to finishing their own projects, yet knowing when to use – and when not to use – grain filler is essential to getting an attractive finish. Put simply, grain filler is needed when applying a film finish – for instance, lacquer, varnish or shellac – to ring porous woods such as oak, ash (Fraxinus excelsior) or walnut (Juglans nigra). The grain filler prevents finish from being wicked away by the large open pores of these timbers and achieves a level and smooth finish. Where grain filler is not used on such timbers, the finish build-up will be uneven and will result in small dimples where the finish has soaked into

the large pores. Occasionally this can be a desired effect. For instance, I have seen some electric guitars produced with a 'thin finish' and no grain filler so that the player can feel more of the texture of the timber. Although coloured grain filler is widely available, in my experience achieving a good colour match with pre-coloured filler can be hit and miss. The best results are often achieved by mixing your own stain to match the particular project and then applying it to a transparent filler. Closed porous wood, such as maple (Acer saccharum), does not benefit from grain filler and any staining required is generally best applied either in the sanding sealer coat or in basecoats of finish. F&C



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Rosewood chiffonier side cabinet – part 2

In the second part of our restoration project, the Editor looks at extending the life of a set of original drawer runners on his rosewood chiffonier



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Our tired rosewood chiffonier side cabinet at the beginning of the restoration process

If the eyes are considered to be the window of the soul, then when it comes to period furniture the drawers are where you can look for the signs of either a charmed life or one of hard labour. Although there is definitely something charming and honest about well-used pieces nobody wants to see a row of misaligned drawers poking out of the front of an otherwise neat frame. Drawer construction will tell us a lot about the overall quality of a piece; more often than not the more traditional the style, the more we regard the workmanship to be of a higher quality. The irony of course is that this quality workmanship is doomed to fail eventually. If the wear and tear is addressed early then any remedial work might be regarded as routine maintenance, like shoeing a horse. If not, the course of action will be for something a little more drastic. This, unfortunately, was the fate of our rosewood chiffonier.



Over-width sections have been used to improve the drawer runners performance before

Course of action

In any construction where there is likely to be wear on one or more components it pays to make one of them from a softer material than the other. When considering this you may want to make the softer component easily accessible for its inevitable replacement. In this case it will be the runners. At first glance this might not look so easy but a lot of good-quality period furniture has this serviceability built in thanks to the nature of the construction. The back of our cabinet is a double panel and frame design screwed into rebates in the sides of the carcass as well as at the top and bottom. Some deft work with an old screwdriver, reground to fit the screw heads, soon had it off to reveal the runners in all their worn out glory.

The runners are slotted into housings cut into the cabinet sides and then tenoned into the front rail. Loose panels are slotted into grooves that line up all the components and a central runner suspended from the top of the cabinet carcass. This part of restoration is one

of the most rewarding aspects of the job if you reverse engineer the making of some details.

One of the first things I noticed was that there were very few screws holding the back on; in the early-to-mid 1800s screws would have been expensive so were used sparingly. All good cabinetmakers have an eye for symmetry and our 19th-century craftsman has put a screw along the top of his back in the middle, but in so doing has screwed directly into a part of the frame that's dovetailed into the top and the central runner support. He's decided the fixing therefore is not sound and has put another screw off to one side. No doubt he probably kicked himself at the time for making such a schoolboy error but he wasn't the first and won't be the last to do it and his secret is safe with us.

Removing these parts is easy because there is little or no glue holding any of it in place. What glue there is has long since dried up and once removed from the cabinet you can examine the extent of the wear.



The back is screwed into rebates along the cabinet sides



The runners are formed around a series of housings and loose-fitting panels, often referred to as dust panels



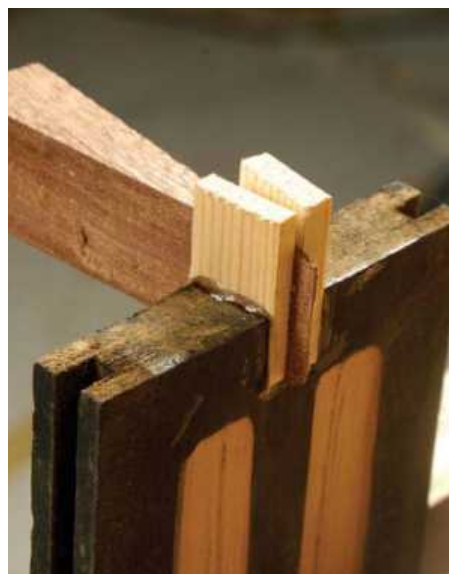
A combination of full-length and stub tenons locate the runners into the front rail



The runners are well worn with channels wider than the combined thickness of the original drawer sides and slips

Minimal intervention

One thing for which we can thank our craftsman is ploughing all his grooves exactly in the centre of his frame components. It's good practice generally and as it turns out a real benefit for us as it means we can just turn the runners over, flip them from left to right and reuse them with a fresh surface facing up. The only adjustment required is to reshape the dovetail joint at the back of the central frame to take the strut that holds it to the top of the cabinet carcass. It's common practice to cut components that span the width of panels with opposing grain direction short. The panels, or sides of the cabinet in this case, are likely to shrink whereas the runners are not either forcing the front rail from its housing or the back panel from its rebate. It may have been an oversight by our craftsman but the central runner was left long causing the back to bow out in the middle. I decided to trim it to allow the back to sit comfortably within the rebate and not put the carcass under any stress.



A little extra material is required to enable the dovetail socket to be re-cut



Keep the wedge in place after the glue has dried while you trim the bulk of the waste



The support strut is now holding the central runner upside down. Note the two arrow-head shaped wedges of new material



The central runner needs trimming to length to match the width of the carcass sides. The dovetail socket was increased to suit



A new hardwood divider was added to the central runner using the original cut nails



The original runners are returned to the carcass facing up the other way

Period detail

Retaining as much of the original piece as possible is always paramount when working on period furniture and that includes all the ironmongery. Screws and cut nails can help you date an object and maintain that all-important authenticity should you wish to pass the item on. The screws on our cabinet have their slots cut off-centre with a tapered shank and feature a constant diameter thread. The tips are also blunt. All this adds up to a screw that would have been state of the art from 1830 and totally in keeping with furniture dating from the Regency period.



Reassembly

Invariably some remedial attention will prove necessary after any invasive work to a cabinet of this style and age; in this case it was to plug and re-drill the screw holes that hold the back in place. When the screws were taken out, they brought with them a lot of dry rusty dust, effectively stripping the hole of any thread capable of taking the screws. To revitalise them I used a compressed air canister to blow out the dust and plug the holes with mahogany



Clear the screw holes of debris with an air gun or vacuum

or soft wood as required using hide glue adhesive. Each screw hole was then drilled out with a series of progressively larger drill bits until the screws bit without stripping out the plug. A dab of paraffin wax was used to lubricate each screw and in the event of them having to be removed again the next craftsman will know I've been thinking of him. He can then determine whether I've been a crafty so-and-so in my attempts to preserve this piece or just cutting corners.



Plug the holes with an appropriate material

Conclusion

With minimal intervention I've smartened up our chiffonier's appearance. The drawer fronts no longer look like wonky tombstones and the runners don't feel like well-worn dirt tracks. I have used all the original parts and neither added nor removed much material. And what has been done can be reversed quite easily. *F&C*

Next month

We repair the chiffonier's doors.



The drawer fronts are now sitting comfortably

Jigs & Fixtures

In an extract taken from *Taunton's Complete Illustrated Guide to Jigs & Fixtures*, Sandor Nagyszalancy makes two jigs that allow you to cut and shape dowels accurately

Dowel-splitting guide

This bandsaw jig is designed to accurately slice dowels. You can use it to cut a kerf in the end of a dowel for using a wedged tenon, or to saw a dowel entirely in half lengthwise.

To make the jig, start by cutting a 2in-wide, 1½in-deep V-groove down the center face of a strip of 2x4 lumber at least a foot long. On the bandsaw, cut a 1in-wide notch, positioned 3in from one end of the V-block – see Fig A. Extend the notch just past the center of the V-groove. Crosscut a 3in length from the other end of the strip, flip it over, glue it atop the strip next to the notch and then bandsaw a ¾in-long slot precisely at the center of the V-groove – see Fig B – to accept a kerf-alignment vane. Make the vane by cutting a 3in-long section from an old bandsaw blade with the teeth ground off. Wrap both ends of the vane with tape until it fits snugly in the kerf – see Fig C. Secure it in the kerf by first drilling through the block and vane at each end and then pinning it in place with a couple of finish nails.

Glue the jig atop a square base cut from ½in or ¼in-thick hardboard. Clamp the jig to your bandsaw table with the blade set into the notch just ahead of and perfectly parallel to the vane. Make a test cut on a scrap of dowel and realign the jig if necessary. Finally, glue a wood strip – sized to fit your saw's miter-gauge slot – to the jig's base to facilitate positioning of the jig for future use – see Fig D.

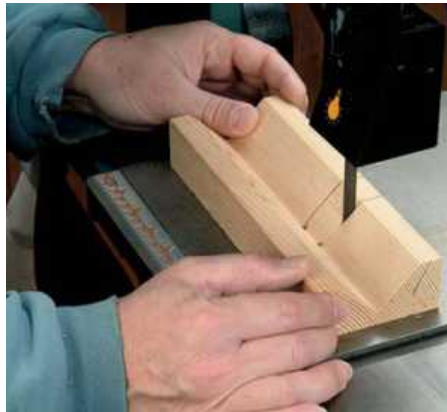


Fig A



Fig C



Fig B

Handy hint

The dowel-splitting guide can also be used to cut a kerf in the ends of square tenons to accept diagonally placed locking wedges.



Fig D

Dowel-pointing guide

If you have a stationary disc sander, this jig makes it a breeze to chamfer the ends of dowels and rods or to put a sharp point on them. The jig has two V-grooves: one for small-diameter dowels, and one for dowels up to 2½in in diameter. Make the guide from a 10in to 14in-long block of 2x4 lumber or by using a combination of suitably sized triangular sectioned stock – see Fig E. The next step is to miter the end of the block to the desired angle, which will depend upon how sharp a point or how steep a chamfer is desired. At the extremes, an angle of 45° will yield a more obtuse tip or chamfer, while a 15° angle will create a very pointy end. After cutting the angle, glue the block atop a ¼in-thick hardboard base. With a thin cardboard spacer sandwiched between the miter face and your sanding disc – see Fig F – glue a wooden runner – sized to fit your sander's miter-gauge slot – to the underside of the base. This keeps the jig aligned while allowing it to slide back and forth to make use of the entire sanding disc. To protect your fingers, attach a small piece of thin hardboard to the base – see Fig G. To create a point or chamfer, simply place a dowel in the groove with the end pressed against the disc, and rotate it by hand. For more precise work, you can fit it with a wooden stop collar, which butts up against the end of the V-block to restrict the thrust of the dowel against the disc – see Fig H.



Fig E



Fig G



Fig F



Fig H

Handy hint

You can use the dowel-pointing guide to put a precise point on pencils with round shanks.

Dowel-sizing jig

This sanding jig quickly and accurately reduces the diameter of any dowel you can chuck in your drill press. Start by making a 6in x 12in baseplate for the jig from ½in-thick plywood or MDF. Bore a row of holes through the base, located approximately as shown – see Fig I. Include one hole for each desired size of dowel, spacing the holes at least ⅜in apart. Each hole should be ½in larger in diameter than the nominal dowel size. For example, drill a ½in-diameter hole for ¼in-diameter dowels. Cut the pivoting sanding arm from a piece of 2x4 lumber. Make it 1⅞in wide x 9¾in long – this particular arm is sized to accept a standard 3x21 sanding belt that has been slit and torn in half lengthwise. Bandsaw the ends of the pivot arm to a half-round shape and then sand them smooth – see Fig J. Also cut a ¼in x 1⅞in x 8¼in wood shim, and sand its ends to a taper as shown. The shim slips in between the belt and the back side of the pivot arm to keep the belt snug. Bore a hole through the base near the corner opposite the dowel holes, and mount the arm with a wood screw – see Fig K.

Chuck a dowel into the drill press with the end you want to size poking down through the appropriate-sized hole in the jig and extending down through the drill-press table. Now clamp the jig down, set the drill press to a low speed, and switch it on. Pivot the sanding arm against the dowel, using light pressure while feeding the



Fig I



Fig J



Fig K



Fig L



*Taunton's
Complete Illustrated
Guide to Jigs & Fixtures*

by Sandor Nagyszalancy

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dowel down through the hole to size for the desired length – see Fig L. Check the dowel diameter with calipers. As the sanding belt wears, rotate it on the pivot arm. *F&C*

SAWS 2015



We look at the work of Calgary's finest woodworkers from their recent bi-annual showcase

SAWS – Southern Alberta Woodworkers Society – is a vibrant collection of passionate woodworkers, some professional cabinet and furniture makers, and some serious amateurs. Part of SAWS' mandate is to bring before the public excellent examples of fine woodworking and this year's exhibition was no exception. In fact this is the third time *F&C* has featured a gallery

from their bi-annual showcase. Each piece has been subject to a two-step process; first being scrutinised for workmanship before a second assessment by an independent jury for design making sure that visitors see the best of the best. We've narrowed that list down even further to bring you taste of what was on display.



'Rooted' by Andy Lockhart: "The maple (*Acer saccharum*) burl top is so sensual and organic that it needs a base, which looks like it is growing out of the ground. The steam bent, coopered and carved walnut (*Juglans nigra*) base is designed to reflect a tree trunk and roots. The top is asymmetric and is offset from the base, looking like many windblown trees in the forest." Made of maple burl and black walnut at 890 x 610 x 460mm



'His And Hers' by Tom Gorman: "My son designed this box as a wedding present, the two halves of the box representing the union of two people." Made of bubinga (*Guibourtia demeusei*), maple and birdseye maple at 330 x 180 x 125mm



'Maple Pod' by Dale Lowe: "My interest in woodturning has evolved from utilitarian bowls and vessels to sculptural and fabricated pieces. These new pieces present texture, colour, form and at times negative space. The intent is to present a story, a personal response or an idea to the viewer. Pod forms are a natural occurrence and have been made in many different media. This is my interpretation of a pod that could be either merging or emerging and that there may be a hidden secret in this womb." Made of curly big leaf maple (*Acer macrophyllum*) and ebony (*Diospyros spp.*) at 180 x 125 x 535mm

PHOTOGRAPHS COURTESY OF SAWS

'Hall Table' by John Morel:
"A clean design with the idea
of showing off three woods as well
as visual space." Made of sycamore
(*Acer pseudoplatanus*), koa (*Acacia koa*)
and wenge (*Millettia laurentii*)
at 1,370 x 305 x 965mm



'Inukshuk Bowl' by Merv Krivoshein: "This poplar slab was cut
at ground level and when placed upright resembled an Inukshuk.
The centre was badly spalted, so it was bandsawn out to create
the rectangular open space. When a bowl was placed in this
rectangular space the outline of the bowl was more pronounced.
Since Inukshuks are made from flat rocks, I felt the bowl should
be turned from stone. To add a bit of humour and structurally
support the upright slab, skis were placed at the base." Made of
poplar (*Liriodendron tulipifera*) and stone at 535 x 215 x 560mm



'Serenity' by James and Eileen Jones: "This is another example of the technique I learned from Bill
Berry down in Texas at the Southwest Area Woodturners Symposium. On this piece, I chose a different
route as I first sprayed the pattern and then went over this with a thin coat of green. I am very motivated
by this technique and hope to include it on a number of pieces in the near future. This piece is made of big
leaf maple and as usual is finished with a gloss urethane." Made of big leaf maple at 230 x 70mm



'Rosewood Light Sticks' by Don James: "I was looking through a site on Pinterest one night pertaining to natural edge table tops and saw a grouping of candle sticks that immediately caught my eye. I set out to duplicate the idea with my interpretation. Seven separate candle holders with similar details in the same wood looked quite stunning. My apologies and thanks to the inspirer; there was no name that I could see." Made of rosewood (*Dalbergia latifolia*) and padauk (*Andaman padauk*) with heights varying 125mm to 25mm



'Wooden Spirograph' by Don James: "This is the first piece produced on my 'repurposed' wood shaper faceplate lathe. I wanted to incorporate hand and machine turning and this is the result. I was able to use a router rotating around a centre point with an indexing mechanism to create the Spirograph effect. This gives an interesting vortex or black hole effect. The Manitoba maple (*Acer negundo*) was hand turned into the centre area, stained and lacquered." Made of Manitoba maple at 915 x 32mm

'Dining Table' by Tom Gorman: "Beautiful wood to work with. The wood for the base all came from one large board of bubinga, as did the edges for the top. The olive ash (*Fraxinus excelsior*) veneer for the top was a rare find. I feel privileged to build furniture from nature's raw beauty." Made of olive ash veneer and bubinga at 1,170 x 749mm



'Jatoba Bench' by Mike Mulvey: "A friend had stair treads made of jatoba (*Hymenaea courbaril*) and gave me the offcuts, not a sufficient length for a chair or table but ideal for this bench. I'm grateful for the challenge." Made of jatoba at 710 x 380 x 460mm

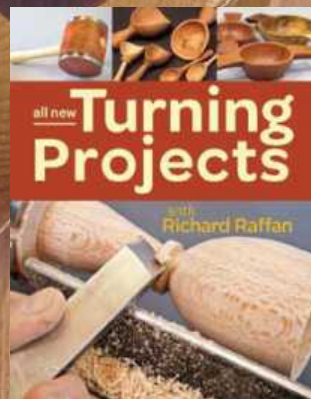
'Joy Bubbling Up' by Jean Claude and Talar Prefontaine: "Our intent was to make a playful piece with an uplifting character. An upward motion is suggested through the use of contrasting elements on the vertical plane. The background is symbolic of mood and transitions from dark to light. The large oval shapes and circles lend an organic character, while providing a strong contrast to the straight lines of the frame. The circles, symbolising joy, are moving upwards like bubbles in a tall glass of champagne. The mirror is getting narrower toward the top while the frame has parallel sides, creating a dynamic relation between the two." Made of cherry (*Prunus avium*), curly maple and multiple veneer species in marquetry at 735 x 35 x 1,625mm



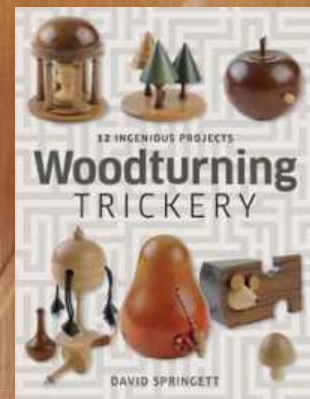
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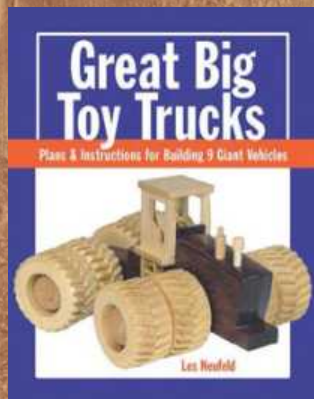
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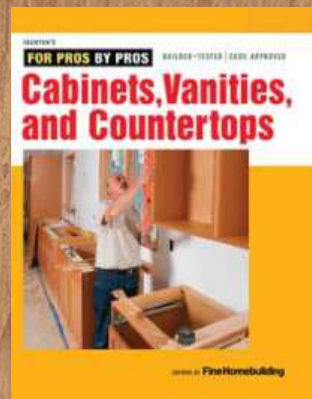
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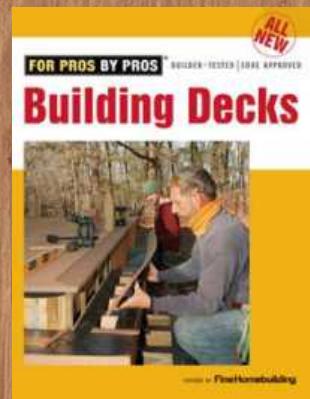
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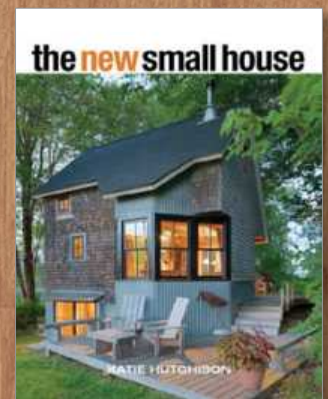
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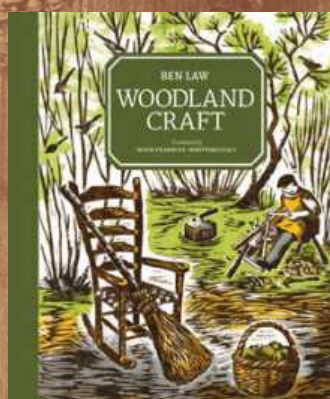
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Virtuoso: The Tool Cabinet and Workbench of Henry O. Studley

In an extract taken from *Virtuoso: The Tool Cabinet and Workbench of Henry O. Studley*, Donald C. Williams looks at the details of the cabinet

My late colleague and dear friend Melvin J. Wachowiak, Jr. once remarked that anything made more elegantly than necessary for its usefulness was art. By that assessment, with which I agree, the Studley tool cabinet

is unrestrained art. There are a multitude of visual and physical moments in the cabinet that did not need to be there. Their presence is either to aesthetically enhance the whole, or to demonstrate the maker's virtuosity at his craft and his delight in it.

The inlays

To a modern woodworker the tool cabinet might seem opulent, even garish, but in the late-Victorian world of organ and piano building, the exuberance made sense. The material vocabulary is what you would expect for a palette of inlays on a piano-maker's toolbox: ivory, ebony and mother-of-pearl. The inlay techniques Studley used on the cabinet were straightforward and exacting. For the round, button-like inlays he likely used a drill bit to excavate the pockets. The inlays vary in size, but most are in the range of 1/4in in diameter plus or minus, with a few in the 1/8in-diameter range. Almost all of the 136 ivory inlays are buttons or roundels.

The 217 mother-of-pearl inlays are more evenly divided between buttons and roundels, and pieces of other shapes – alas, I did not conduct a count on that distribution. The shaped pieces were 'made to fit', but there is no way to identify which came first, the void or the infill. Typically intarsia – a technique by which pieces are literally 'inset' into a background – is accomplished by first creating the decorative element, then creating a void to fit that element by scribing the outline of the element on the background and excavating a void. My microscopic examination of the inlays was cursory and inconclusive, but I did not see any tool marks on the background surfaces. Regardless of their material or shape, on all but a few of the inlays there are no irregularities until extreme magnification is employed. The opulence of using ivory buttons, inscribed with inked numbers to mark the progression of tool sizes – for example, the graduations of the drill bits – is awe-inspiring. There is place for every drill bit in the graduated set, and an engraved ivory button for each drill bit. Also take note of the subtle but elegant treatment of the bottoms of the spacers between each Gothic arch; the curved double-chamfer is found in numerous locations throughout the cabinet, almost never glaringly obvious. Concurrently, the mother-of-pearl elements used as mere decoration impart an intense luminescence to the cabinet, especially as the light or the viewing position changes.



The scale and density of the decorative details in the Studley cabinet limited each element, especially the inlays, to about a quarter the size of a postage stamp



On the right side of the cabinet, where Studley located sets of graduated drill bits, he marked the sets not only with engraved flat ivory roundels but also with half-spherical ivory buttons



This gallery of examples of Studley's mother-of-pearl intarsia is indicative of the artwork in the cabinet. While the cabinet would be remarkable even in their absence, the presence of these shimmering bits of pearlescence bring the ensemble to life



With enough magnification you can receive a bit of comfort knowing that Studley was not a flawless automaton

The sculpted details



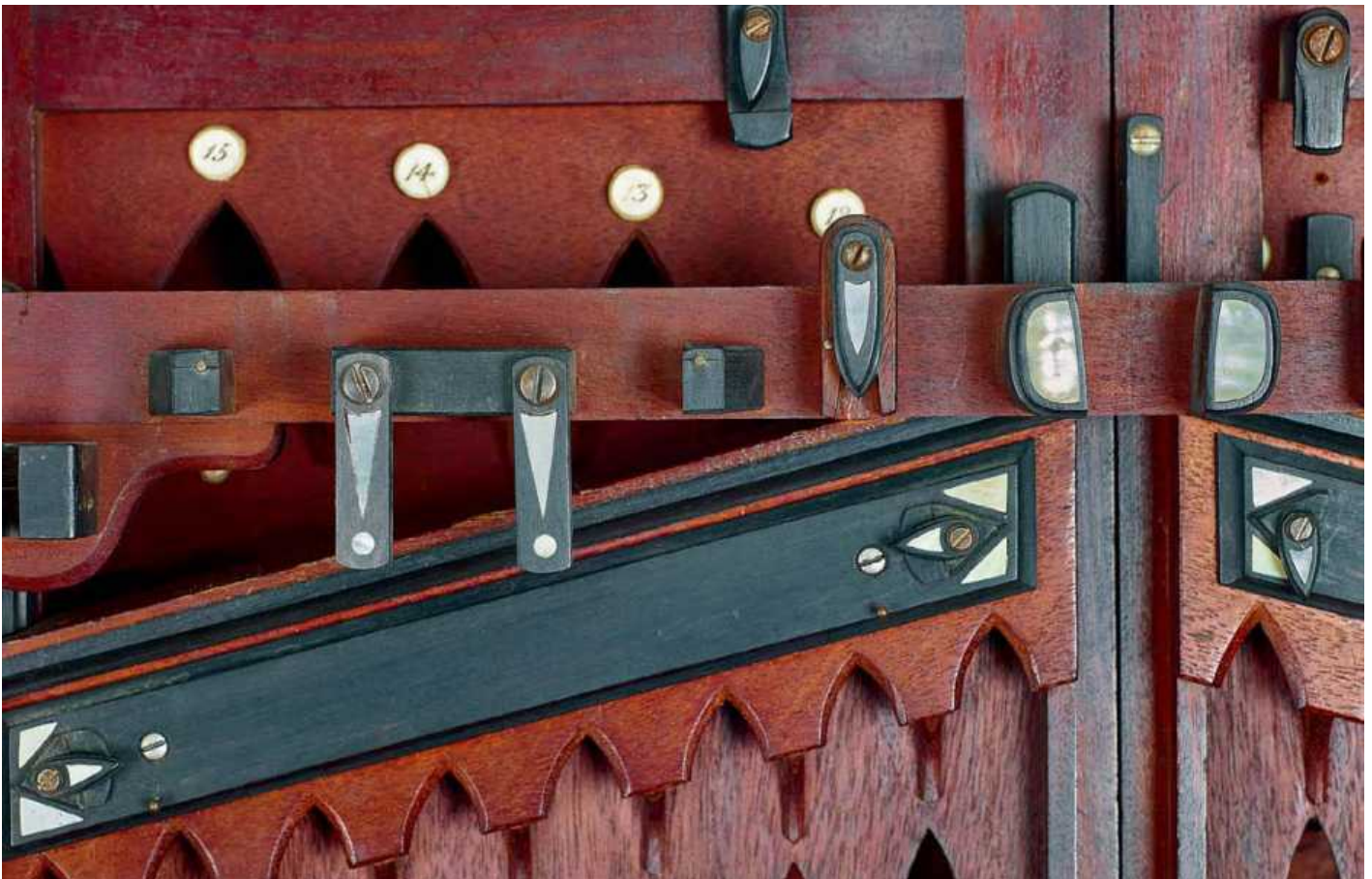
The technical and artistic complexity of this one element is astonishing. The turned ebony (*Diospyros spp.*) plugs for the nickel-plated tube – there is one at each end – are adjacent to a series of ebony and mother-of-pearl roundels mounted on sculpted ebony backplates. To carry the power of the accomplishment even further, the swinging tab that restrains the tube in its shaped wire fitting is a spectacular carved ebony 'L' with tapered chamfers on both sides of the two curves

The strictly sculptural elements of the cabinet, by which I mean those that are rendered and presented to the viewer in three dimensions, number literally in the hundreds. Because it is not possible to rank them in importance or even prominence, I will cluster them into four major areas.

First are the roundels, turned button-like elements scattered throughout the cabinet, never haphazard and always enhancing adjacent elements. There are many different sizes of roundels, ranging from about 3/8in to 1-1/2in in diameter. Most, but not all, of the roundels are festooned with round mother-of-pearl inlays at their tips. Each of the

roughly two dozen roundels is turned from solid ebony. Closely related to the roundels are the drawer pulls and stopper buttons at the ends of the metal tubes containing tools. I include these 17 examples here because, like the roundels, they are small, turned ebony elements. Second are the shaped decorative elements, which are further subdivided into those that are 1) functionally similar to the roundels in that they are applied to the background, or 2) movable tabs or catches used to restrain tools. Most of these from either category are further enhanced by mother-of-pearl inlays and reflect the element outline as a whole.

Of the first group, numbering roughly 90, many serve to frame a space but others are demarcations between tools belonging to a graduated set, such as the chisels and drill bits. The second group consists of about 50 ebony tabs. The third type of sculptural enhancements are carved elements serving as stand-alone sculptures in their own right. The most prominent of these is the drop pendant that tops the arch above the niche containing the Stanley No. 1 plane. The detail on this element is breathtaking, all the more so when you consider its scale; it is roughly the size of a dime. There are only a dozen or so of these examples in the case,



In this single image you can see clearly eight movable ebony restraining tabs, six with inlays, and another five fixed saddles. For scale, the diagonal ebony piece is made to hold a 6in rule

but they are spectacular and attention-grabbing. The final widespread instance of sculptural exercises in the cabinet includes the arches and their buttresses, most notably around the set of four awls above the Masonic symbol, along with those around the chisels and the two sets of drill bits, which are in the upper right portion of the cabinet on the second and third layers. The arch-and-buttress vignette framing the awls takes its place proudly among the most beautifully designed and

crafted artworks I have ever seen.

Quantifying precisely the inventory of these decorative details is nearly impossible – is it a series of a dozen arches, or is it a single element of an ascending set of arches? – and frankly not especially useful. But because you asked, I number the total of individual decorative elements to be in excess of 500. Perhaps the most gifted craftsman I know recently replicated a single inlaid mother-of-pearl and ebony element from Studley's cabinet and found

it to be a vexing and time-consuming effort. If we fixate on the herculean labors of Studley we might become obsessed with the mechanistic minutiae of envisioning and fabricating hundreds of stylistic touches, each consuming some quantity of a superb craftsman's time. Instead I ask you to think of them – and the case itself – as a unified cornucopia in which the whole is infinitely more affecting than a summation of the magnificent individual components. *F&C*



The arched crest above the small alcove that houses the Stanley No. 1 plane is bisected by this drop pediment, for which there are not enough superlatives to describe. Roughly the size of a dime, the element draws my eye to it every time. The arched alcove is an important Masonic symbol, and Studley honored that iconography with exacting care and skill



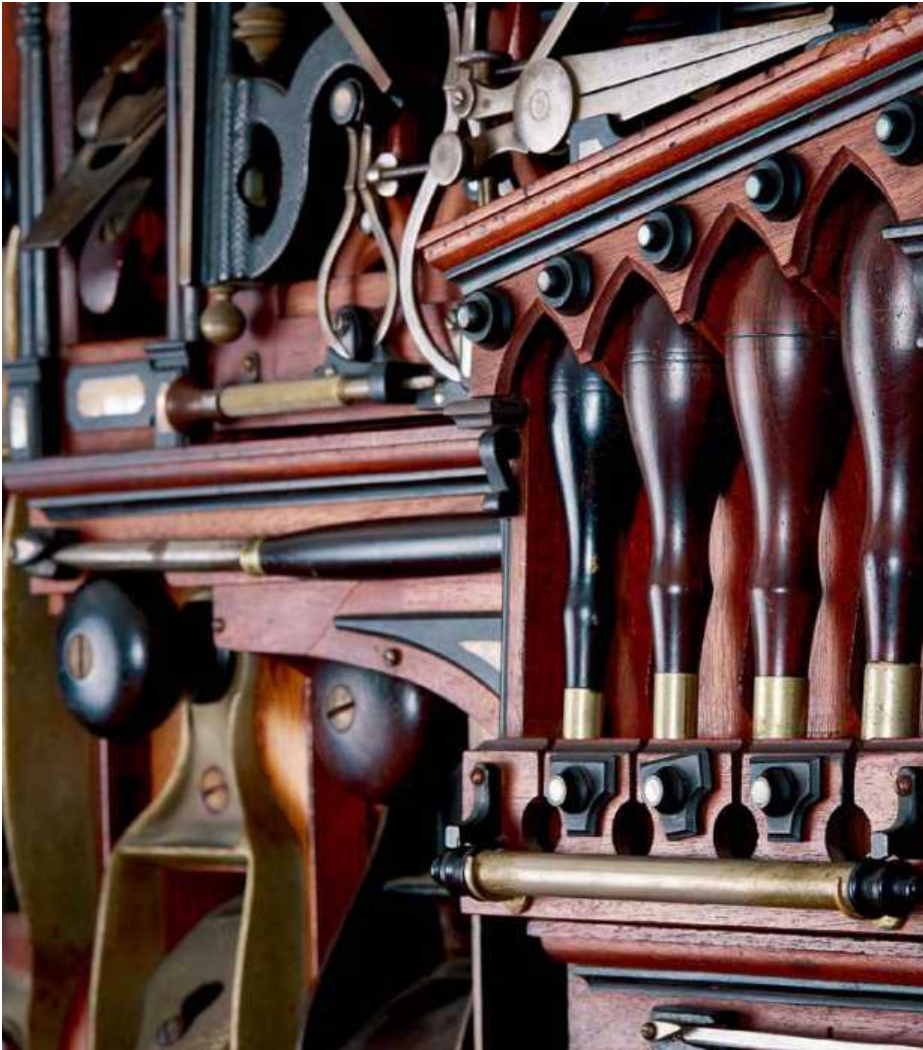
Though not nearly as prevalent, in roughly a dozen instances Studley used aluminum 'flipper' tabs to restrain tools. Was this because he didn't have the right-sized ebony pieces, or just that the spaces for the tabs were so small that ebony would have been too fragile?



There are several diminutive carved ebony 'S' scrolls in the cabinet, and this one acts as a support bracket where none is needed. Even at this scale, the entire detail is approximately 1/2 in in height, there is a minute chamfer to the edges



The carved ebony capitol from the Masonic vignette is approximately the size of a nickel



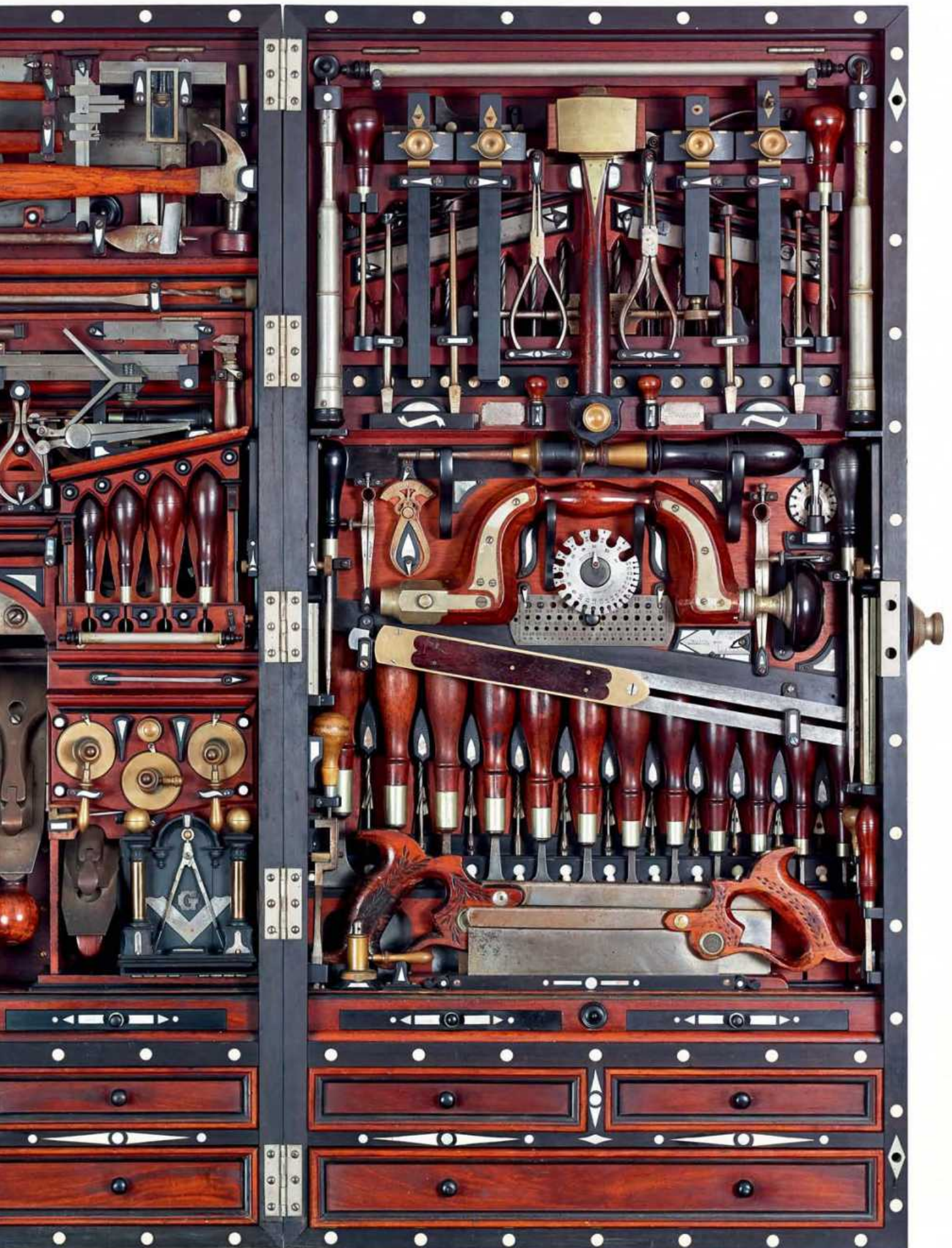
I make no apologies for being captivated by this compartment in the Studley cabinet. The composition and execution are flawless and, like many of the details in the cabinet, can only be fully appreciated when the tools are removed



The use of Gothic arches is prevalent throughout the cabinet's interior, but nowhere is this feature more prominent than in Studley's presentation of graduated drill bits. Appreciating this decorative feature requires the tools to be emptied to see the bare cabinet and the vision Studley had for it

The tool cabinet and workbench of Henry O. Studley





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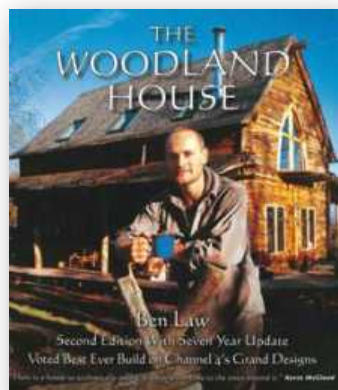
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This month Kieran Binnie, Susan Chillcott, Briony Darnley and Matthew Pearson review four books for you to enjoy

BOOKS



The Woodland House

By Ben Law

The *Woodland House* by Ben Law is a second edition of the book, with a seven-year update and the house featured in the book – voted Best Ever Build in Channel 4's *Grand Designs* – was built by Ben for under £28,000 using materials from his own woodland. This book, therefore, is an interesting insight into Ben Law's work, his underlying ethos and his designs. There is also a bonus of a foreword by *Grand Designs*' Kevin McCloud on the house.

Ben has designed *The Woodland House* as a dual-purpose book. The first is as a volume for the 'armchair enthusiast'; the second as inspiration for those wishing to build a similar structure with a similar process. It is a step-by-step guide that looks at the basics of self-building and gives full details of Ben's evolving design process. Ben identifies the materials used, the cost and goes into detail of the project management and the building stages – from foundations and frames to interior features.

The book contains eight chapters, which are broken up further – making the text-based book an easy read. These chapters are: why build?; the design process; building regs; preparation; building at last; plastering and services;

reflections; and further building. The chapters progress through each step of the building process and are illustrated with more than 100 colour photographs. The photographs are reproduced to a nice quality and are clearly captioned. Illustrations are also included. The final section of the book is the appendices, which includes roundwood engineering calculations.

Published by Permanent Publications
ISBN: 9781856230445
104 pages £14.99



L'art du Menuisier: The Book of Plates

By Andre Roubo

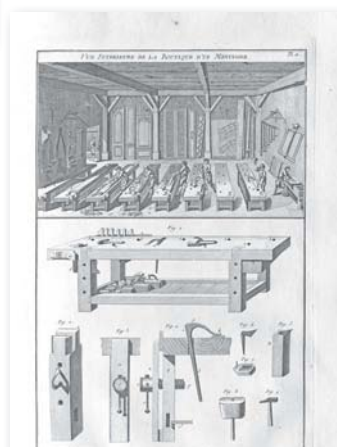
Despite having been out of print for many years and never translated into English, *L'art du Menuisier* by Andre Roubo is an iconic work for many traditional woodworkers. *L'art du Menuisier: The Book of Plates* is a full-sized printing of all 382 plates from Roubo's masterwork, reproduced in archival quality.

The 255 x 355mm casebound volume truly is an heirloom book and oozes quality. Each plate is rendered with incredible

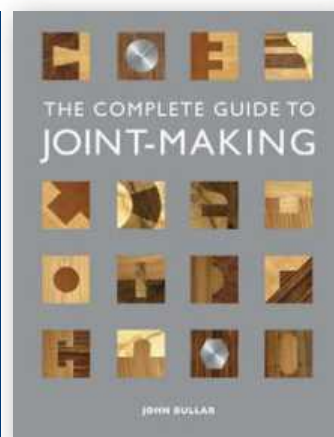
quality and the detail of the engraving leaps off the page. The detail is such that each plate offers a wealth of information and clues as to the woodwork techniques of the past. The lack of text means that some of the pages of geometric principles are a little impenetrable, but even these pages are very beautiful and the presence of iconic images such as the workbench of Plate 11 more than make up for this. Nothing beats looking at the plates in full size. The one compromise is the division of the 45 larger plates across two pages each, due to the technical difficulty in reproducing these in single fold-out pages to the necessary quality.

Although Lost Art Press suggest that this volume is intended as an accompaniment to the translation of Roubo on Marquetry – and the second translated volume is due out in 2016 – rather than a standalone book, *The Book of Plates* makes for a wonderful historic reference, not to mention a handsome coffee table book.

Published by Lost Art Press
ISBN: 9780990623014
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The reproduced images offer a glimpse into the woodworking skills of the past



The Complete Guide to Joint-Making

By John Bullar

Arguably the most important factor in the success and longevity of any piece of furniture rests on the correct choice and skilled execution of the wood joints used within it. John Bullar provides this knowledge in an accessible and comprehensive way.

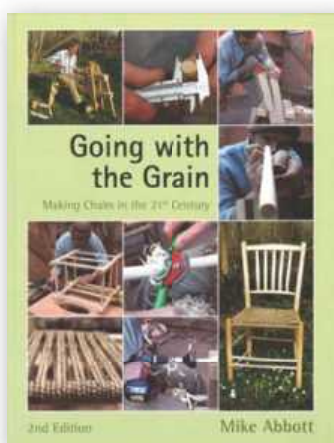
The opening chapter has a solid overview of the key woodworking tools and machines as well as excellent pages on wood movement and the potential effect it can have on wood joints over time. The main body of the book explains how joints can be made by hand tools or machines, as well as those techniques which encompass straight-line, special and display joinery.

Ancient and modern wood-joining methods are covered, from the green woodworking of Windsor chairs to modern magnetic knock down fittings. Each joint is clearly explained by captioned photographs and there are useful tip boxes for extra guidance. The 'why' as well as the 'how' is clearly explained, ensuring that an appropriate joint can be chosen with considered understanding.

John manages to balance the tricky tightrope between

reference book and entertaining read and the treasure trove of information is presented in such a way that he does so with ease. This book does more than educate the reader about how to make joints, it also encourages the woodworker to explore and experiment, to enter the exotic territories of the Fox Wedge and the Chinese chair joint. *The Complete Guide to Joint-Making* can serve as both an excellent workshop how-to companion guide as well as a bedtime read to inspire you on to your next project.

Published by GMC Books
ISBN: 9781861088789
176 pages £16.99



Going with the Grain: Making Chairs in the 21st Century

By Mike Abbott

Recently, green woodworking has been capturing people's imagination with a real upsurge of interest in bodging crafts, pole lathe turning, chair making

and spoon carving. So I was keen to review a book that promised to teach me how to make a traditional chair. When I saw that it was by Mike Abbott I was even more keen! Mike is one of the UK's leading green woodworkers, with 30 years chair making experience and was featured in the BBC's 2009 *Mastercrafts* series.

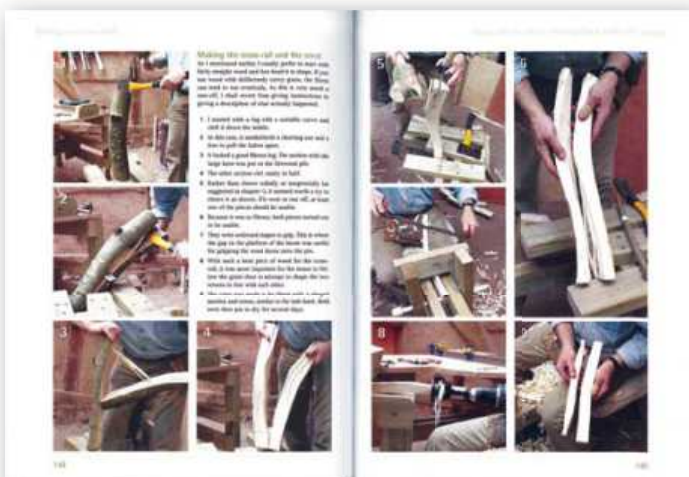
The blurb on the back says that this is not a book for cabinet makers, although they are welcome to read it. This is true as the text is accessible to everyone who has the dream of making a chair, even without any prior experience.

Mike starts by explaining green woodworking principles and tools. He then provides a very well illustrated step-by-step guide about how to build some essential green woodworking kit, the shave horse and chair maker's bench. Both are quickly made with building-grade timber, a cordless screwdriver, screws, bolts and a sash clamp.

Very detailed guides follow for the construction of several stools and seats. It's important to note that this book focuses on frame chairs of the Hereford vernacular, which are assembled from chair components made with the draw knife – as such, pole lathe turned Windsor chairs are not covered in this book. Nevertheless, the chairs and stools on offer in the book are all very tempting projects.

With the addition of an extensive section on weaving materials and patterns, this is a complete and accessible guide to chair making for everyone.

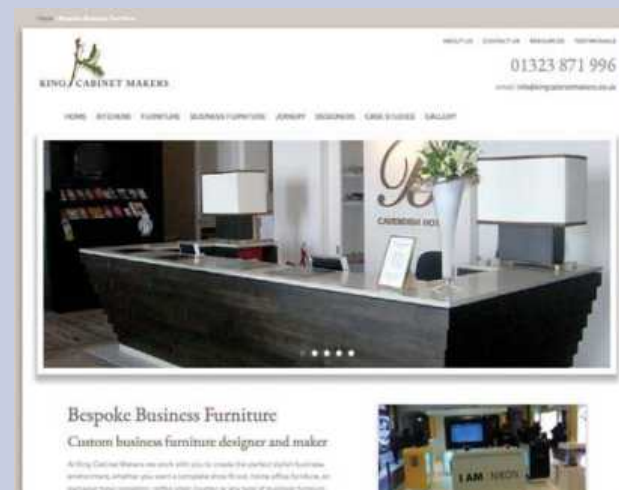
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The classic Cotswold features of the Ernest Gimson studio attributed to Peter van der Waals c.1910

Website of the month

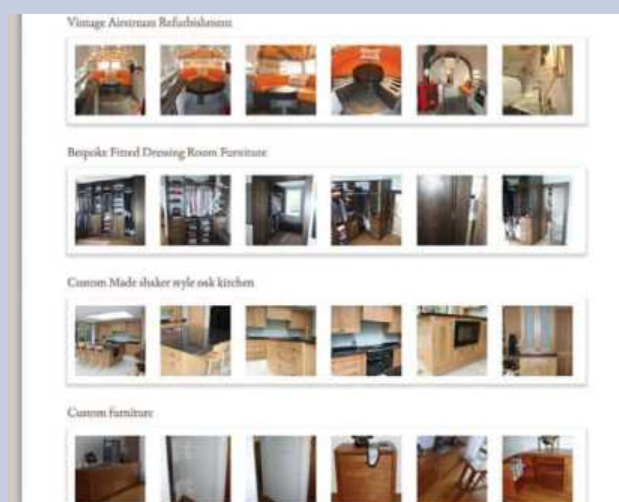
King Cabinet Makers



King Cabinet Makers is a clean and professional website, offering specialist bespoke furniture for the maker's local area. The company is a family-run furniture designer and furniture maker that specialises in bespoke kitchens, hand-crafted furniture, bespoke business furniture design and manufacture, and specialist joinery. It serves clients across Sussex, London, Kent, Surrey, Hampshire and the South East.

From the homepage, a slideshow of the company's work can be seen, using beautiful high-quality photographs. King Cabinet Makers' homepage menu includes: kitchens, furniture, business furniture, joinery, designers, case studies and gallery. Again, each of these pages uses a slideshow at the top, showing off the company's well-crafted work. Should you wish to see more of its commissions, visit the gallery page, which contains a number of the latest projects.

At the very bottom of the fresh coloured homepage, King Cabinet Makers' contact details are highlighted.



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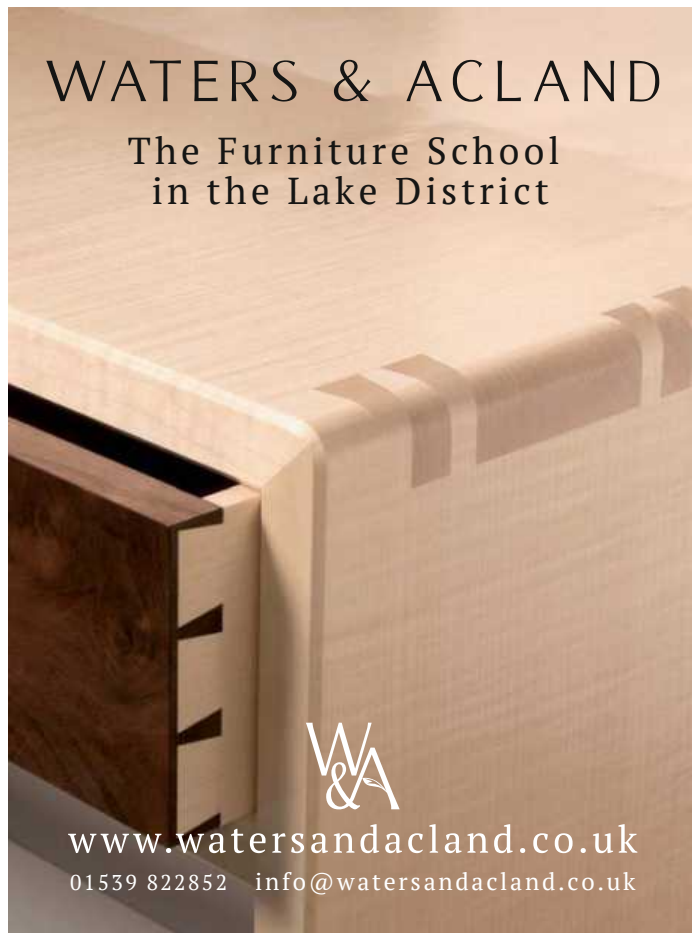
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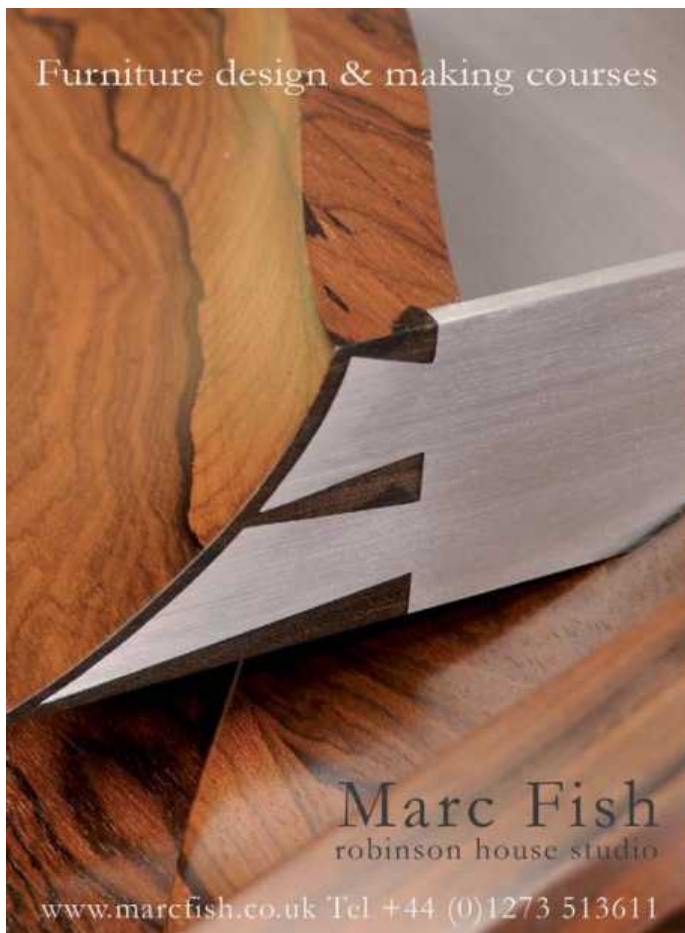
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UNDER THE HAMMER:

17th-century giltwood mirror

We take a look at one of the lots from Bonhams' recent 'Europe – Defining Style' auction

This 17th-century giltwood mirror recently went under the hammer at Bonhams' 'Europe – Defining Style' auction, which featured fine European furniture, works of art, sculpture and silver and gold boxes. The mirror stands at 160cm wide by 220cm high.

This type of imposing boldly carved scrolling-acanthus mirror was produced in various centres in Italy including Lombardy, Veneto and Rome in the late 17th century. The decorative scheme is derived from engravings such as those executed by the Roman ornamentalist Filippo Passarini (1638-1698), taken from his pattern book published in Rome in 1698 called *Nuove invenzioni d'ornamenti d'architettura e d'intagli diversi utili ad argentieri intagliatori ricamatori ed altri professori delle buone arti del disegno*, or from



PHOTOGRAPH COURTESY OF BONHAMS

17th-century giltwood mirror in all its glory and (left) a detail of one of the cherubs

designs by Giovanni Paolo Schor, circa 1670, now in the Museum der Bildenden Künste in Leipzig, Germany. Designs and drawings relating to this type of mirror can also be found in the Fondazione Fantoni in Rovetta, Italy. The mirror features a

rectangular bevelled mirror plate within an elaborately carved frame with scrolling foliage, the cresting with three putti holding a flower-filled basket, the sides and apron with further putti, joined by foliate garlands and swags, regilt. **F&C**



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